

# Users Manual

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GB means 1 billion bytes; actual formatted capacity varies with preloaded material and operating environment and will be less.

TB means 1 trillion bytes; actual formatted capacity varies with preloaded material and operating environment and will be less.

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<b>Introduction</b>	<b>4</b>
<b>Front View</b>	<b>4</b>
<b>Rear View</b>	<b>5</b>
<b>System Setup</b>	<b>6</b>
<b>Connecting the Storango SCM200/SCM400 to the Network</b>	<b>6</b>
Connecting the Ethernet cable and power:	6
Connecting a USB drive:	6
Connecting a USB printer:	6
Turning the System On	6
Turning the System Off	7
Resetting the System	7
<b>System Configuration</b>	<b>7</b>
<b>Logging into the SCM200/SCM400 configuration utility</b>	<b>7</b>
Windows, Linux, and Mac	7
<b>System Configuration</b>	<b>9</b>
General Setup Screen	11
Alerts Setup	12
Change Admin Password	13
Firmware Update	14
Printer Management	15
Configuration Management	16
Advanced Setup	18
Network: LAN Setup Screen	20
Network: Services	22
Workgroup/Domain Setup	24
<b>Storage Screens</b>	<b>26</b>
Disk Management Screen	26
Volume Management	27
Manage RAID	29
Share Management	32
USB Management	35
USB Backup	36
<b>Access Control Section</b>	<b>37</b>
User Management	37
Group Management	40
Share Access	44
USB Access	46
Using the Media Server	47
<b>Using the Status Menu</b>	<b>51</b>
Logs	52
<b>Product Support</b>	<b>55</b>
Troubleshooting	55
First Steps Checklist	55
Specific Problems and Corrective Actions	55
<b>Technical Specifications</b>	<b>56</b>

## ***Users Manual***

### **Introduction**

The Storango SCM200/SCM400 storage appliance is a powerful and feature-rich system designed as a flexible solution for storing and sharing your digital files across a home or office network or across the Internet.


The SCM200/SCM400 makes remote management a simple task with its Web-based user interface. By using any Web-browser, network and operational settings, such as monitoring the status of the network, installed disks, storage space utilization and others; can be configured from any system on the network, running any operating system.


The SCM200/SCM400's Web-based & Internet style file sharing, in addition to its industry standard network file sharing methods, allows you to store all of your documents, pictures, music, and video files in a central storage location and share files with other computers on your network, regardless of what software they are running. No matter what computer system or style of network you are running, chances are that the SCM200/SCM400 can significantly improve and simplify file sharing, network storage, and backups for you.


### ***Front View***





The functionality of the buttons and LED's are the same between the SCM200 and the SCM400. This manual will use examples for the SCM200, and exceptions for the SCM400 will be noted where necessary.

 **Power Button:** Press the power button to turn the SCM200/SCM400 on. The Green LED under the button will indicate that the system is powered on. Press and hold the button to power the system down. If the LED is off, then it indicates that either the system is still initializing or the system is not powered on. A blinking LED indicates either the system is rebooting or the RAID is rebuilding, and will be unavailable for file sharing or administration during this time.

 **Network Activity Indicator:** The green LED under or next to this icon indicates a network connection. The blinking of this LED indicates network traffic. When this LED is off, this indicates there is no network connection.

 **HDD Status Indicator:** The blinking green LED's indicates formatting, accessing or synchronization of the individual drives. The solid green light indicates that the system is completely synchronized and is ready to use. And amber LED indicates a drive error or an old HDD has been installed with data on it. When this LED is OFF, it means that the drive is not installed correctly or has completely failed.


 **System Identification:** This blue LED indicates that system identification is active. When this LED is off it indicates that system identification is disabled. A blinking LED means there is a critical condition.


 **USB Backup Status Indicator:** This green LED lights to indicate that a USB hard drive is attached, and the system is rebuilding, restoring, or transmitting files to the USB drive. A blinking LED indicates that the system is backing up the USB hard disk or that the system is formatting the drive.

## Rear View



The functionality of the connections on the back is the same between the SCM400 and the SCM200.

 **USB Port:** The SCM400 has three USB ports, two in the back and one in the front. The SCM200 has two USB ports in the back. These ports allow for the connection of USB devices like a USB hard drive, a USB flash drive, or a USB printer.

 **Ethernet Port:** This port connects the SCM200/SCM400 to the local network.

**Reset Switch:** Press the Reset button to restore the SCM200/SCM400 to factory settings. The button is recessed and located above the Ethernet port on the SCM400 and between the power connector and Ethernet port on the SCM200.

**Power Connector:** Use this port to connect power to the SCM200/SCM400. The SCM400 uses a standard computer type AC power cord, whereas the SCM200 uses an AC to DC power adapter.

## System Setup

This section gives instructions on how to setup the Storango *SCM200/SCM400*.

### ***Connecting the Storango SCM200/SCM400 to the Network***

#### **Connecting the Ethernet cable and power:**

Connect the Ethernet cable to the Ethernet port on the rear of Storango SCM200/SCM400.

Connect the other end of the Ethernet cable to a switch or router.

Connect the power to the power connector on the rear of SCM200/SCM400.

Connect the other end of the power cable or adapter to the nearest power receptacle.

#### **Connecting a USB drive:**

Connect the USB cable of your USB hard drive or the USB flash drive to the USB port next to the Ethernet port on the SCM200/SCM400.

Connect the other end of the USB cable to the USB drive, if necessary.

Connect the USB drive to power, if necessary.

#### **Connecting a USB printer:**

Connect the USB cable to the top USB port on the rear of the SCM200/SCM400.

Connect the other end of the USB cable to your USB printer.

Install the printer driver if it is not installed on the computer you are printing from.

## Turning the System On

Power the system on after confirming that all the cables have been connected properly.

LED's will flash and turn different colors.

After 30 seconds, verify LED's are on and correct. The power button and hard drive LEDs should be green. Network LED should be green and may flash.

The SCM200/SCM400 and the computers must be on the same subnet, and DHCP/DNS must be enabled from either a router or a server. If you are uncertain what these terms mean, contact your network administrator or the manufacturer of your router.

## Turning the System Off

To power down the system, press and hold the power button down for about five seconds.

The green power LED will turn off, indicating that a shutdown is in progress.

The shutdown process will start and take about 10 to 15 seconds to complete.

When the other LED's have turned off, the system is off.

## Resetting the System

The storage solution has a reset button in the back. Pressing and holding the button down will reset the IP Address, system name and the password for Administrator to factory settings. After holding the button down for about 15 seconds, the hard drive LED's will turn amber. This is an indication that the system has been reset, and you can now release the button.

Factory default settings are as follows:

IP Address – This will reset the IP address to “DHCP Client”. The IP address will now be received from the DHCP server or the router on the network.

System Name – The system name will now be SCM400 or SCM200, depending upon your system.

Password – The password for the administrator will now be “admin”.

## System Configuration

The storage solution has a web interface for configuration and set up. This section will explain how to access this configuration interface and what the various settings mean.

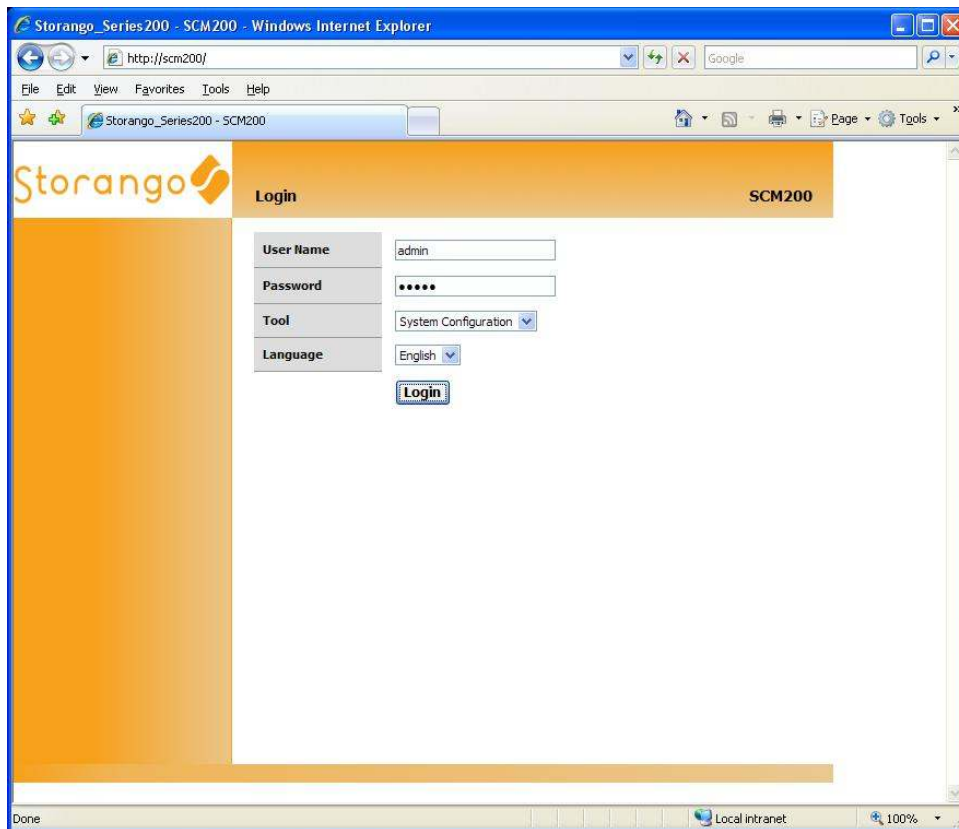
### *Logging into the SCM200/SCM400 configuration utility*

#### Windows, Linux, and Mac

The web access to the configuration utility for Windows, Linux and Mac is the same.

Launch the Internet browser on your PC or Mac.

Type the following: <http://SCM200/> or <http://SCM400/>, if you change the name of the device in the future, type <http://newname/> to access the device. You can also just type the IP address that is assigned by the DHCP server to the storage device.



The above screen will appear on your browser. If the page does not appear, please wait a few minutes and try again. The default user name and password are: admin and admin

Please note that both the user name and the password are case sensitive.

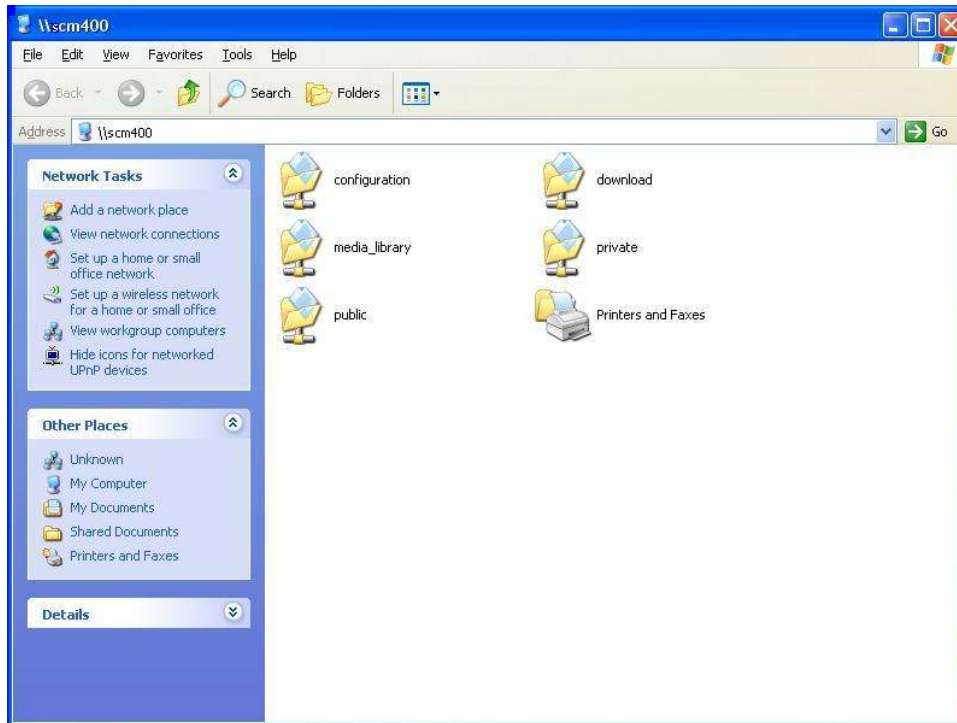


In some cases it may be necessary to open the configuration file directly. You can do this by clicking on Start, Run, and then typing in //SCM200 or //SCM400 depending on which unit you have. You will be prompted for a username and password. It will be the same as previously mentioned (admin/admin).



Once you have clicked on OK or hit ENTER, you will see the following screen:



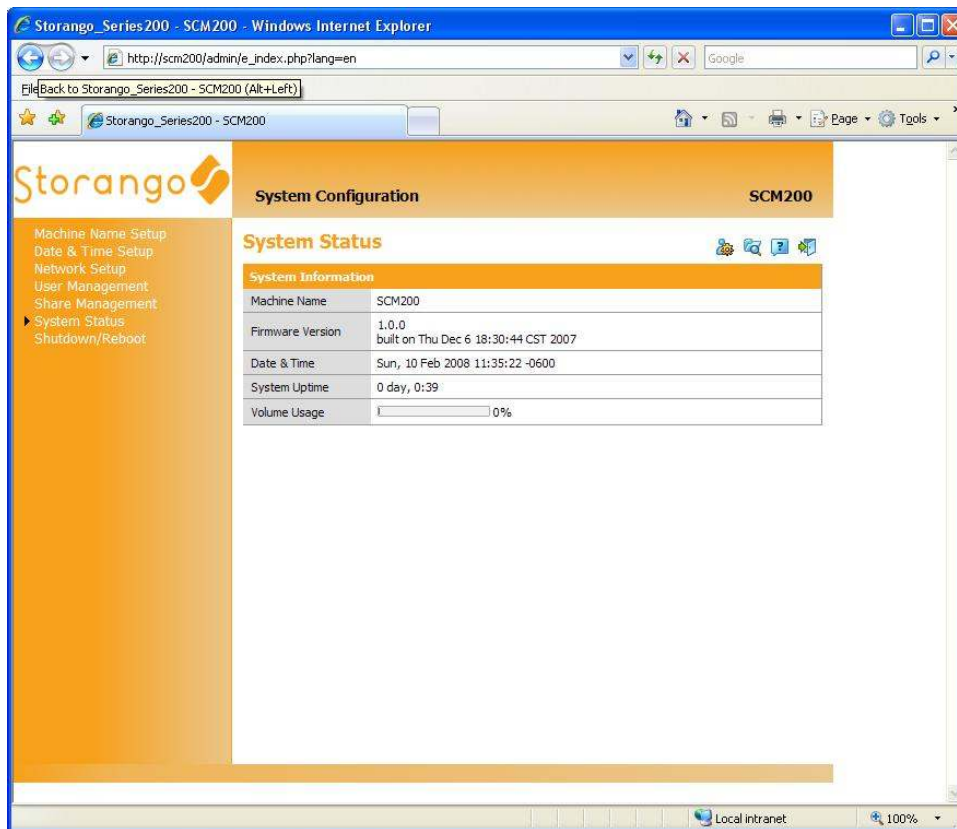



Open the configuration folder by double-clicking on that folder's icon. Once inside this folder, open the Index file by double-clicking its icon. This will bring you to the configuration login screen in the same way as typing the IP address or name directly into your browser.

## ***System Configuration***


The web screen will now show the display below. This will provide you with a high level status of the storage system configuration.

On the left side is a list of configuration choices that you can select to change configurations. The titles are self explanatory in what configuration choices will become available.



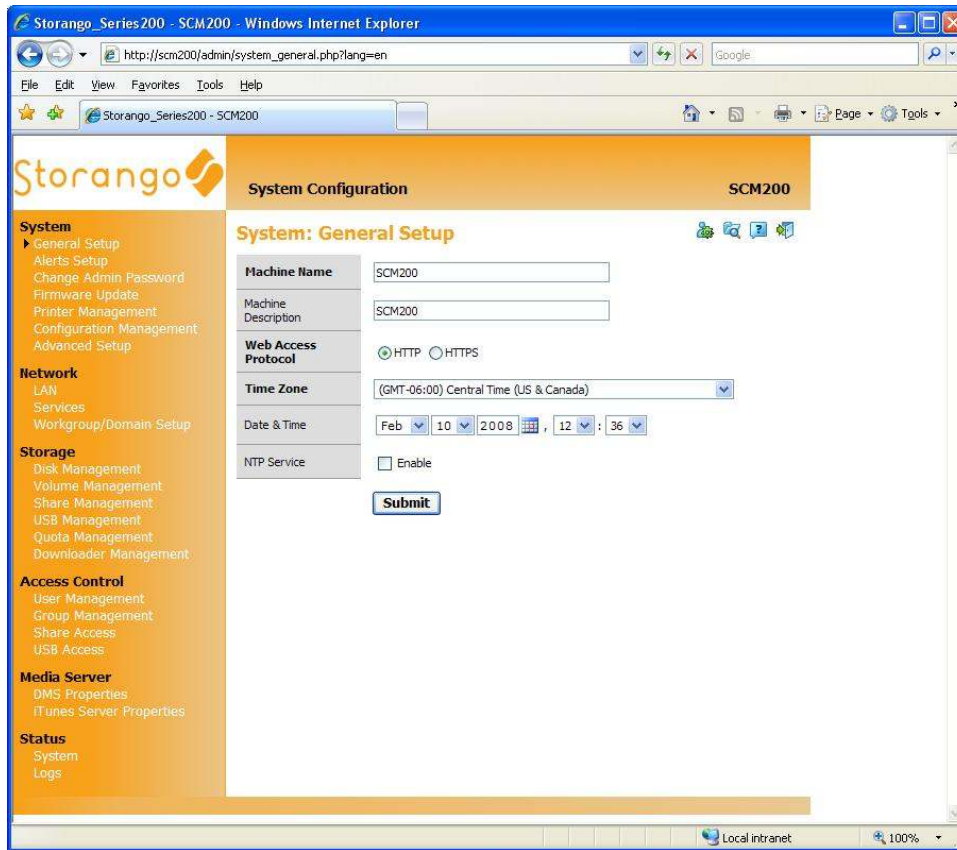
On the top right corner are four icons  , that can be selected for some more detailed configuration choices:

The above is a simplified screen for set up and configuration. The choices are self explanatory for configuration and setup.

To get to more detailed configuration screens, select  icon from the top right corner. This will take you to the following configuration screen, with more detailed choices. Clicking it again will simplify your choices.



**NOTE:** If at any time you have questions about any of the screens, when you are configuring your SCM200/SCM400, you can just click on the “?” button and an online help screen will appear. This can be a source of good information for you and eliminate the need to contact support in some cases.



## General Setup Screen

This screen allows you to configure the basic information about the SCM200/SCM400 storage appliance, such as give a name and brief description for the machine, select the web GUI protocol, and set the time zone for your storage device. You can also set the date and time or enable automatic time synchronization via NTP (Network Time Protocol) Service. You have to specify the IP address of the NTP servers from which you want to synchronize.

If you want to change the name of the Storage System, you can assign a new machine name for the SCM200/SCM400. The name can contain up to 15 characters, including alphabetic, numeric, underscore, space, and most special characters. We suggest that you keep it short and simple, so it is easier to remember. **Please note that if you have more than one storage solution, then they all need to have a unique names.**

In the description box, enter the brief description for the storage appliance. The maximum length of the description must not be more than 256 alphanumeric characters.

The difference between the two HTTP and HTTPS protocols is that HTTPS is secure web access. You can select the protocol that makes the most sense on your particular network.

In the Time Zone drop-down menu, select the time zone for your location.

In the Date & Time drop-down menu, adjust the date and time manually.

You can set the date and time of the storage solution to automatically synchronize with an Internet public NTP (Network Time Protocol) server. To set the date and time automatically, select the **Enable** checkbox in NTP Service, then enter the IP address of the network time servers from which you want to synchronize.

Click **Submit**.

## Alerts Setup

In the Alerts setup screen, you can configure the system to automatically send e-mails or pop-up messages for event notification, to the administrator to monitor the functionality of the storage device. These messages can be warnings or errors related to Fan, temperature, Hard Drive functionality, Volume, Network, USB, Users and Groups.

### Configuring the email:

Select the **Enable** checkbox

Enter the **SMTP server name** or an **IP address** to be used for sending email.

In the SMTP Port box, enter the **port number** to be used when connected for SMTP sending of e-mail. The default port number for standard SMTP is 25, and 465 for secure SMTP.

In the Email Recipients box, enter the **email address** of the persons you wish to send an event email message to. Up to five emails can be on this list.

Select **Send Test Mail** to send a test alert and confirm your settings are correct.

Select **Submit**.

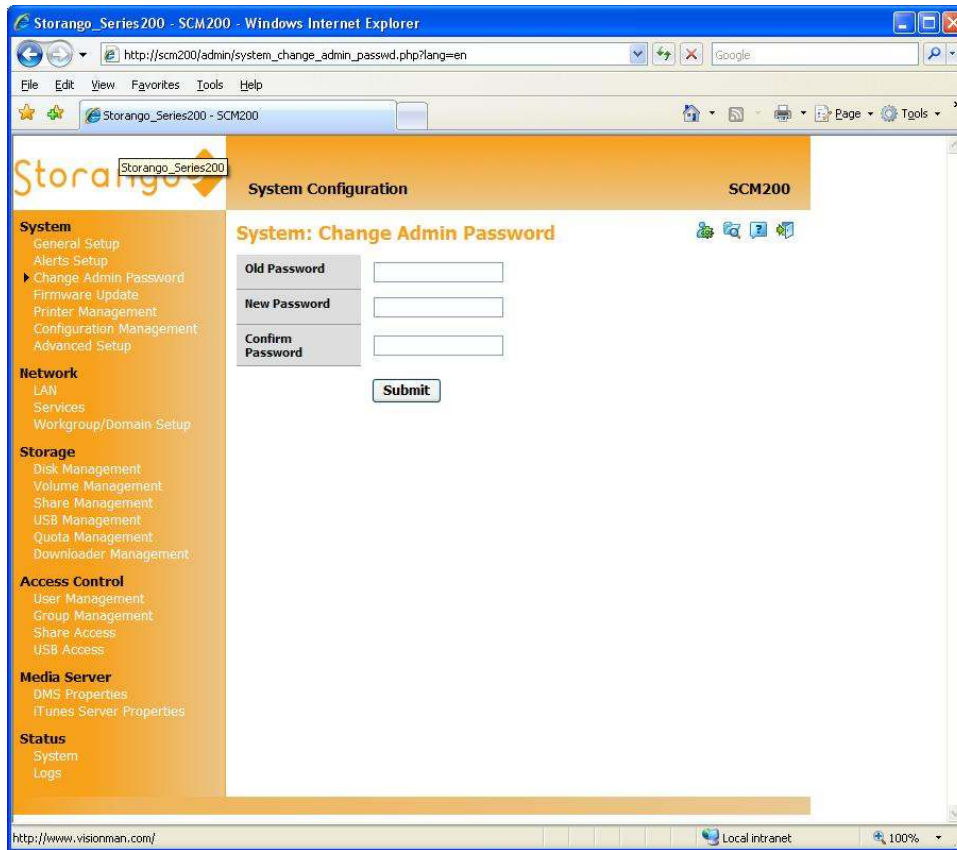
### Configure the pop-up message alert settings:

Select the **Enable** checkbox.

Enter the **name of the computer** you wish to send a pop-up message to, when an event occurs. Up to five computer names can be added to this list. (This requires that messenger service is enabled on the computers that you wish to send pop up messages.)

Select **Send Test Pop-up** to send a test alert and confirm your settings are correct.

Click **Submit**.



## Change Admin Password

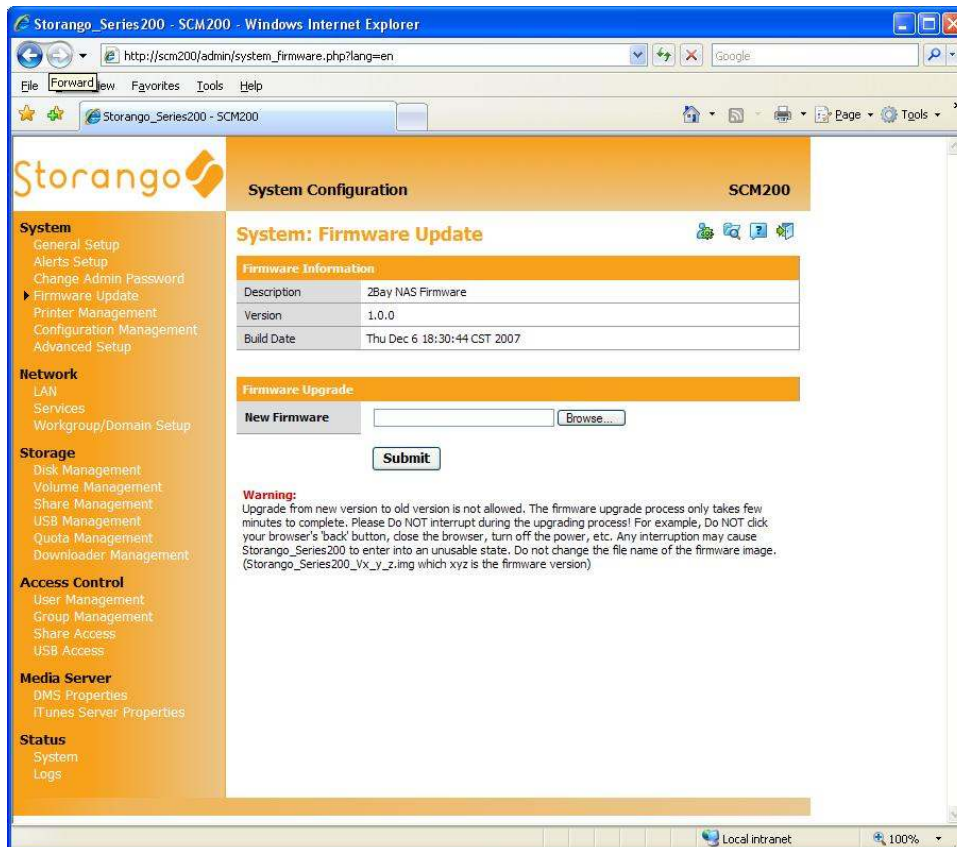
### Change the administrator password:

Enter the **old password**.

Enter the **new password**. The maximum length of the password must not be more than 15 alphanumeric characters. Password is case sensitive and should be entered exactly in the same way each time.

Re-enter the new password.

Click **Submit**.



## Firmware Update

This screen provides information about the current firmware version and allows you to perform a firmware upgrade. Check on our web site to see if a newer version of the firmware is available.

### To upgrade the firmware:

Download a copy of the new firmware from our Website to your computer.

The firmware image filename should have the following format: <firmware version>.IMG; for example SCM200\_V0\_1\_6.IMG. When you download the firmware image file from the site, please be sure that the filename is correct, and do not rename the file.

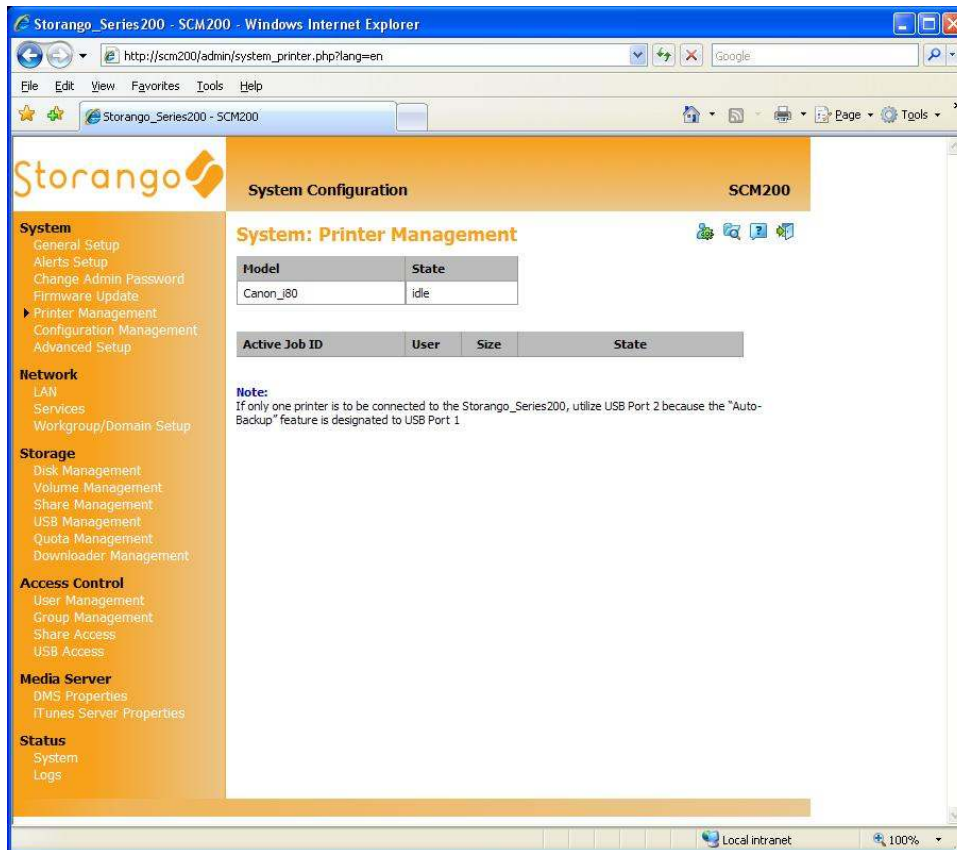
Select **Browse** to locate the file that you downloaded and select the correct IMG file (e.g. SCM200\_V0\_1\_6.img).

Select **Submit** to transfer the firmware file from your computer to the SCM200/SCM400 storage appliance. **Do not interrupt the firmware upgrade process. This may cause the system to become disabled, and unable to function.**



The update process might take a few minutes to complete.

After your firmware has been updated, the system will reboot to initialize the new firmware. The Web GUI will redirect you to the System Information page after the update is completed.



## Printer Management

The Printer Management screen allows you to manage the USB printers connected to the storage device, as well as manage print queues and print jobs across the network.

Install the printer drivers on the PC's that will use this printer.

### For Windows:

Connect the USB printer to the storage device.

Open My Network Places > Entire Network > Microsoft Windows Network > Workgroup Name > Machine Name (where Machine Name is the name of the SCM200/SCM400 storage appliance), then right-click on the **printer** icon and select **Connect**.

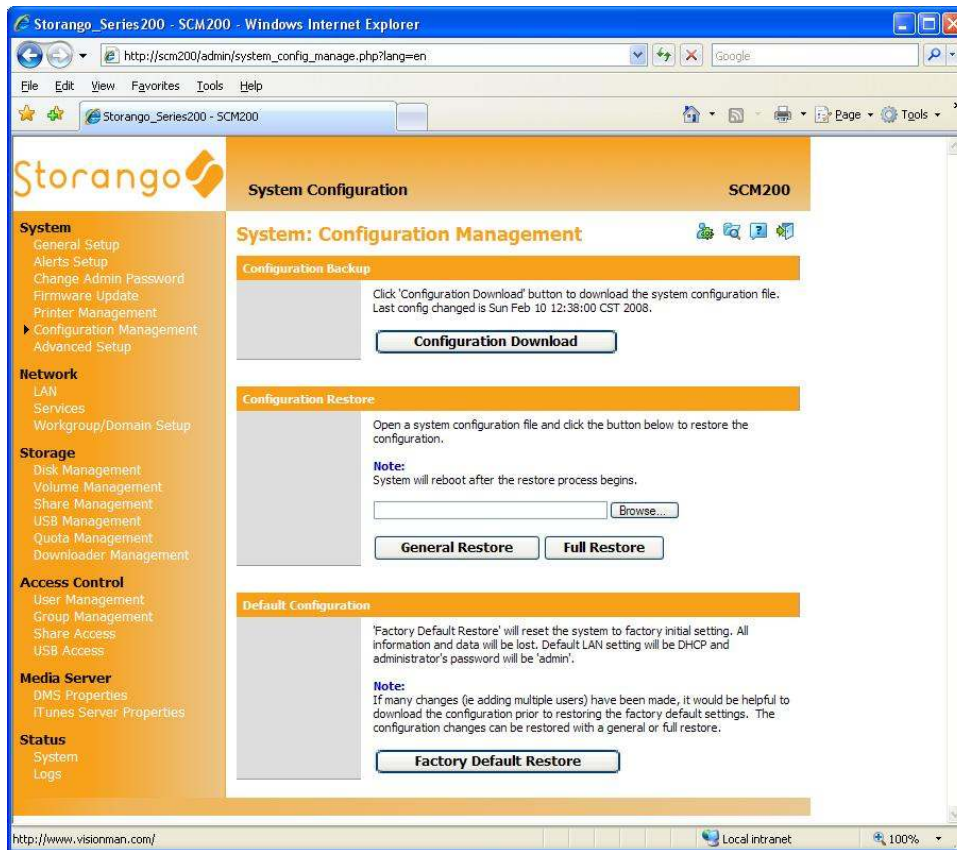
Select your printer model from the list and click **OK**.

### Managing print jobs:

To pause or resume printing of a document, click the **Pause/Continue** icon.

To cancel printing of a document, click the **Cancel** icon.





## Configuration Management

Configuration Management screen allows administrators to easily perform backup or restore operation of the storage systems settings or revert system to factory default settings.

### To backup your current configuration settings:

On the Configuration Management page, click **Configuration Download**.

Click **Open** and specify a file name and location where you want to save the file and select save.

### To restore your configuration settings:

On the Configuration Management page, click **Browse**.

Select the previously saved system configuration file, and select **General Restore** or **Full Restore**.

Selecting General Restore restores all features except the settings for data volume and shares to its previously saved settings. While Full Restore erases all data on the SCM200/SCM400 and revert the data volume and shares to its previously saved settings.

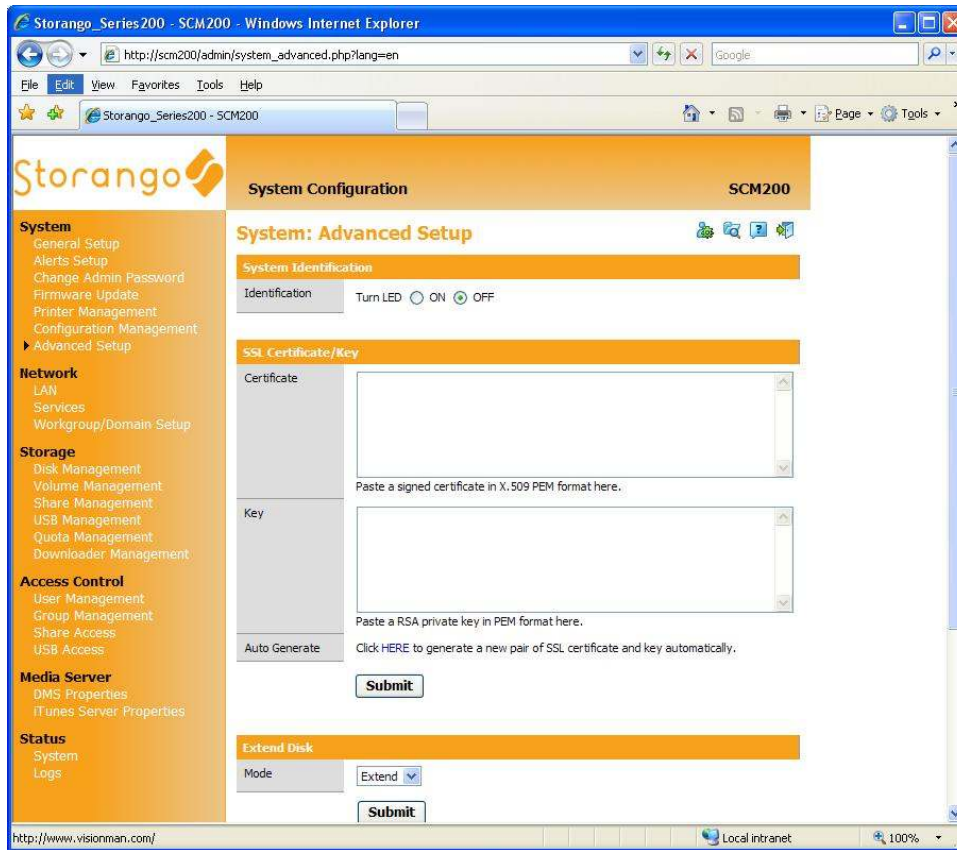
### To restore SCM200/SCM400 to factory defaults:



Performing a factory default reset will erase all settings in SCM200/SCM400. System settings such as the IP address, machine name, admin user name, password, RAID reconstructs, and media files stored in SCM200/SCM400 are lost.

On the Configuration Management page, click **Factory Default Restore** and click **OK**.

**It is important to backup all critical data and files before undertaking any restore operations.**



## Advanced Setup

This screen allows you to configure the system identification LED, setup a system for a secure connection by generating an SSL (Secure Sockets Layer) certificate and a key, and perform a reboot or shutdown for the SCM200/SCM400.

### To turn on the system identification LED:

Click the **Turn LED ON** button to enable the system identification LED, and select **Submit**.

This will turn the System Identification LED on, and this could be useful in identifying a particular storage system if you have multiple units.

### To generate an SSL certificate and an RSA key:

SSL is a protocol for managing the security of passing data back and forth between a client computer and SCM200/SCM400 over the network. SSL uses two keys — a public and a private key, to encrypt data and to ensure a scalable, efficient, and secure file-sharing over the Internet.

Administrators can generate an SSL certificate and an RSA key using this screen.

You can generate an SSL certificate and RSA key by using the System Configuration Utility.

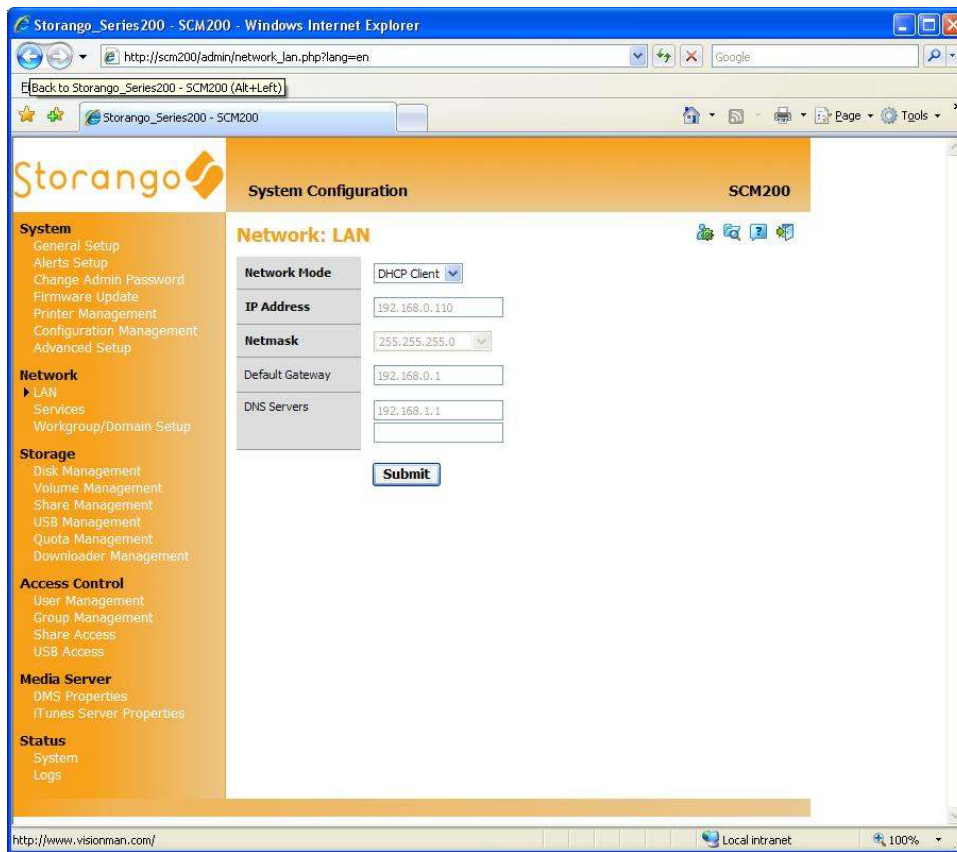
On this screen, select the highlighted word “**HERE**”.

Enter the necessary information for generating an SSL certificate, then click **Submit**.

### To use the “extend disk mode” feature:

By default, your storage system will place the installed disks in what is called a “span” configuration. This utilizes all available disk space for networked storage. If your storage system does not have all the disk slots used you may want to add more capacity later. If that is the case, you may want to enable the storage system’s “Extend” mode.

Click on the drop down menu and select “Enabled” and then click on **Submit**.



## Network: LAN Setup Screen

This screen allows access to all network configuration options; such as setting the connection method, changing the IP address, netmask, gateway, DNS (Domain Name Service) server IP address, and the ability to configure the optional jumbo frame size.

DHCP is the default network IP setting for the storage device. When this option is selected, the system automatically acquires its IP address and IP settings from the DHCP server on the network.

A jumbo frame size support is also included for switch or routers that support jumbo frames. The storage device supports jumbo Ethernet frames to enhance networking performance.

By default, the jumbo frame option is disabled.

### To manually configure the IP settings:

You may want to manually configure the IP settings on your storage system if you are using a static IP address.

On the Network Mode drop-down menu, select **Static**.

In the IP address box, enter a valid IP address and network prefix.

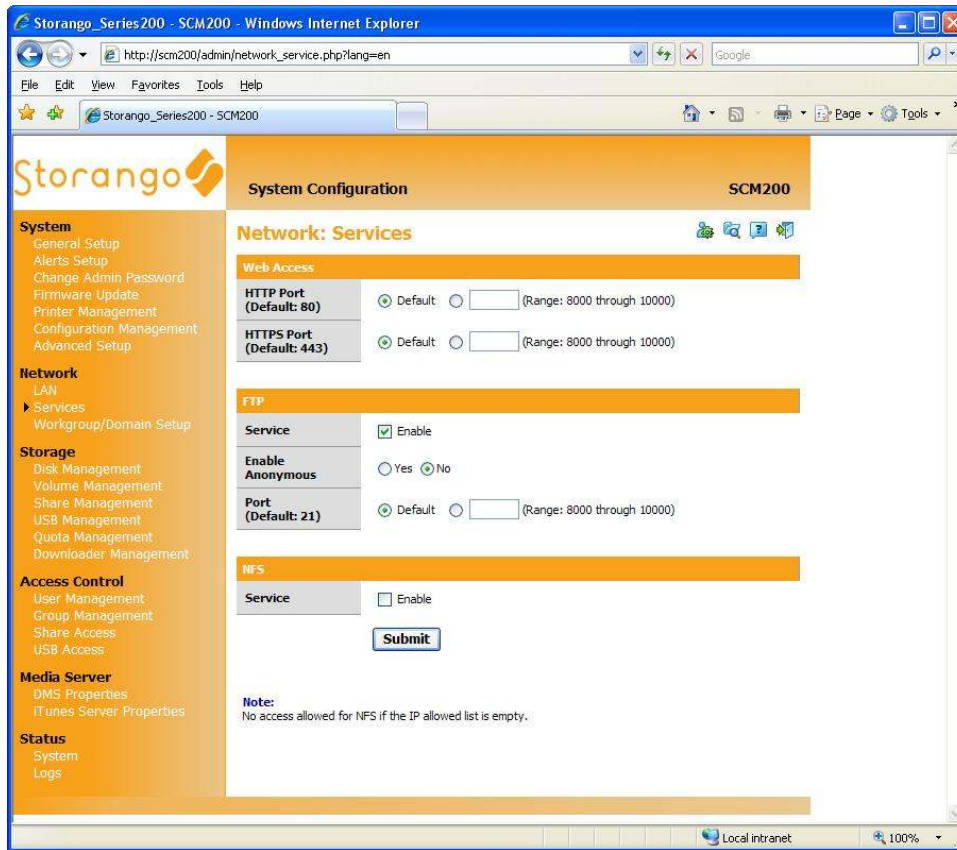
In the Default Gateway box, enter the IP address of the gateway or router.

In the DNS Servers box, enter the DNS server IP address.

In the MTU Size (Bytes) box, enter the appropriate MTU size.

Click **Submit**.

You must restart the system for these changes to take effect.



## Network: Services

The Network services screen allows you to set up and manage file services for different types of clients, such as Mac, Windows, Linux, Unix, on your network using the FTP (File Transfer Protocol) or NFS (Network File System) protocols.

Computers can access files and shared folders on your storage system, without requiring any special software.

FTP (File Transfer Protocol) services allow you to share files securely, between Storage System and other computers, over the Internet.

### To enable the FTP file service on the storage system:

On the Services page, click the FTP service **Enable** checkbox.

Click the **Yes** or **No** button to enable or disable anonymous access to the FTP server.

Public file sharing is easily accessed by enabling anonymous and selecting **Submit**.

### To access SCM200/SCM400 through an FTP:

After you enable FTP files services, you can connect to the storage system via any FTP client.

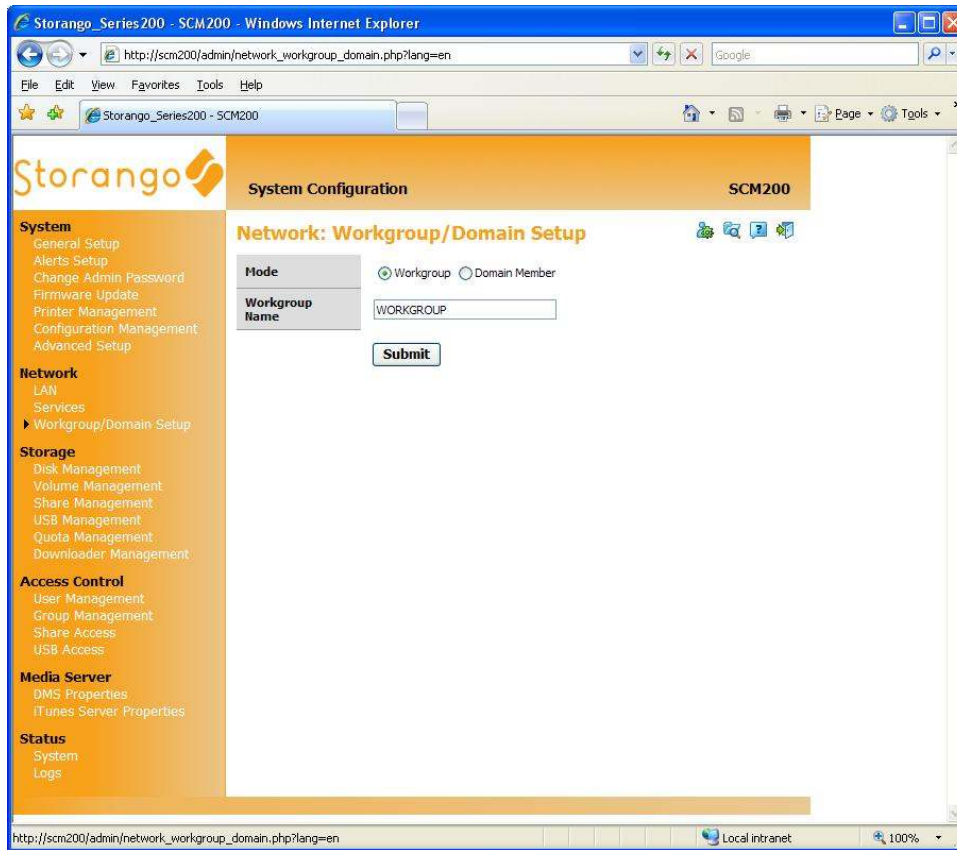
For example if your SCM200/SCM400's IP address is set to 11.45.57.82, entering <ftp://11.45.57.82> in a browser or Windows Explorer address bar will access the SCM200/SCM400's public contents.

NFS services allow you to share files with other Linux or UNIX clients or clients who have the NFS client software.

**To enable the NFS file service on SCM200/SCM400:**

On the Services page, click the NFS service **Enable** checkbox.

The IP Allowed box appears. Enter the IP filters that are allowed for NFS service, then click **Add** to add the new IP filter, and select **Submit**.



## Workgroup/Domain Setup

This screen allows you to setup the storage system as a workgroup or domain member. Both workgroup and domain are ways of grouping computers on the network. By default, the storage system is set as a Workgroup. Unlike workgroups, domains are controlled from a central location (domain controller) and require central authentication before you can join them.

Workgroups, in contrast, are much simpler to control. As long as you know the workgroup name, you can add any computer to a workgroup.

### To setup a workgroup name:

On the Workgroup/Domain Setup page, select the **Workgroup** button.

In the Workgroup Name box, enter a **name** for your workgroup, and select **Submit**.

The storage system will become a member of that workgroup.

### Domain Setup

If your network uses a domain (i.e., has Windows Active Directory Services), you may wish to connect the SCM200/SCM400 as a domain member.

When configured as a domain member, the storage system requests are coordinated by the domain controller on your network to authenticate users. Domain mode has more restrictive security levels, as network users must enter appropriate passwords before gaining access to SCM200/SCM400.

When joining a domain, SCM200/SCM400 needs the authorization of the domain's administrator. You must enter the



Domain Name, Administrator and Administrator Password for the authorization.

**Network: Workgroup/Domain Setup**

Mode	<input type="radio"/> Workgroup <input checked="" type="radio"/> Domain Member
Domain Name	<input type="text"/>
Domain Controller IP Address	<input type="text"/>
Administrator	<input type="text"/>
Administrator Password	<input type="text"/>
<input type="button" value="Submit"/>	

**To join a domain as a member:**

Select the **Domain Member** button.

In the Domain Name box, enter the **domain name**.

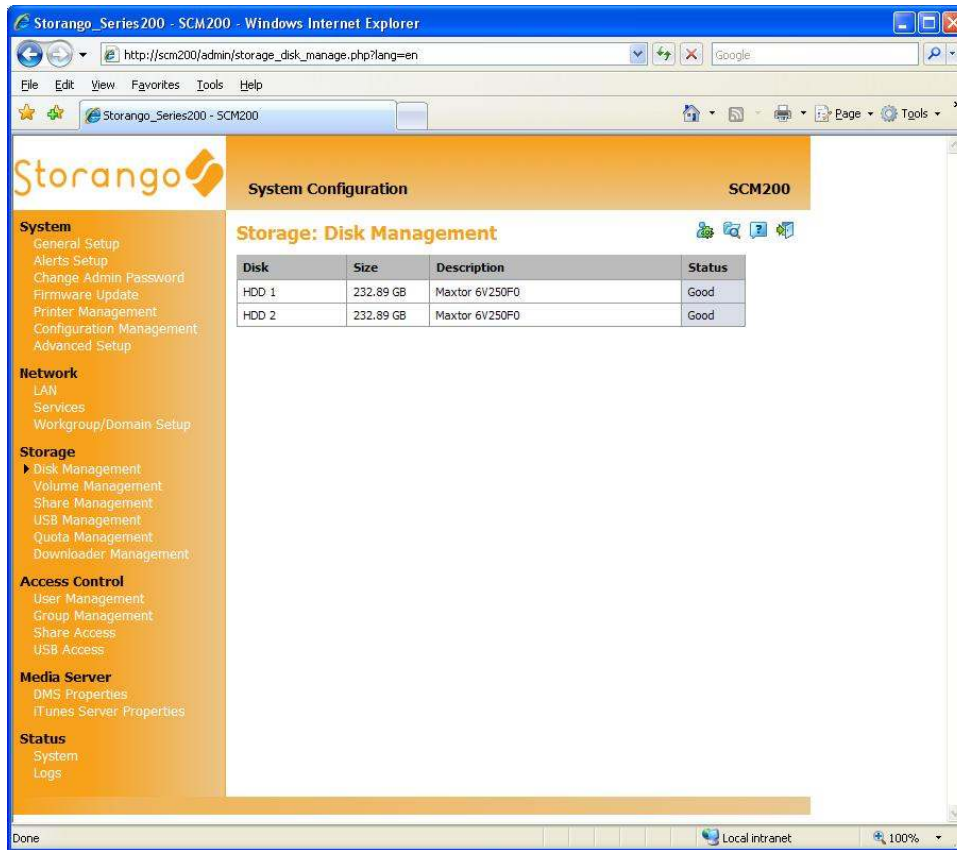
In the Domain Controller IP Address box, enter the **domain controller's IP address**.

In the Administrator box, enter the administrator's **user name**.

In the Administrator Password box, enter the administrator's **password**.

Click **Submit**.

## 2 & 4 DRIVE USER GUIDE



## Storage Screens

The Storage screens provide all the necessary options required for individual storage disk configuration and maintenance. You can also change RAID configuration, set shared folder names, format and disconnect USB hard drives that are connected to the system.

The above screen shows a screen shot from the SCM200, which has two drives. The SCM400 screens will actually show up to four drives, and different RAID configurations. Beyond these two things, the screens will be very similar.

## Disk Management Screen

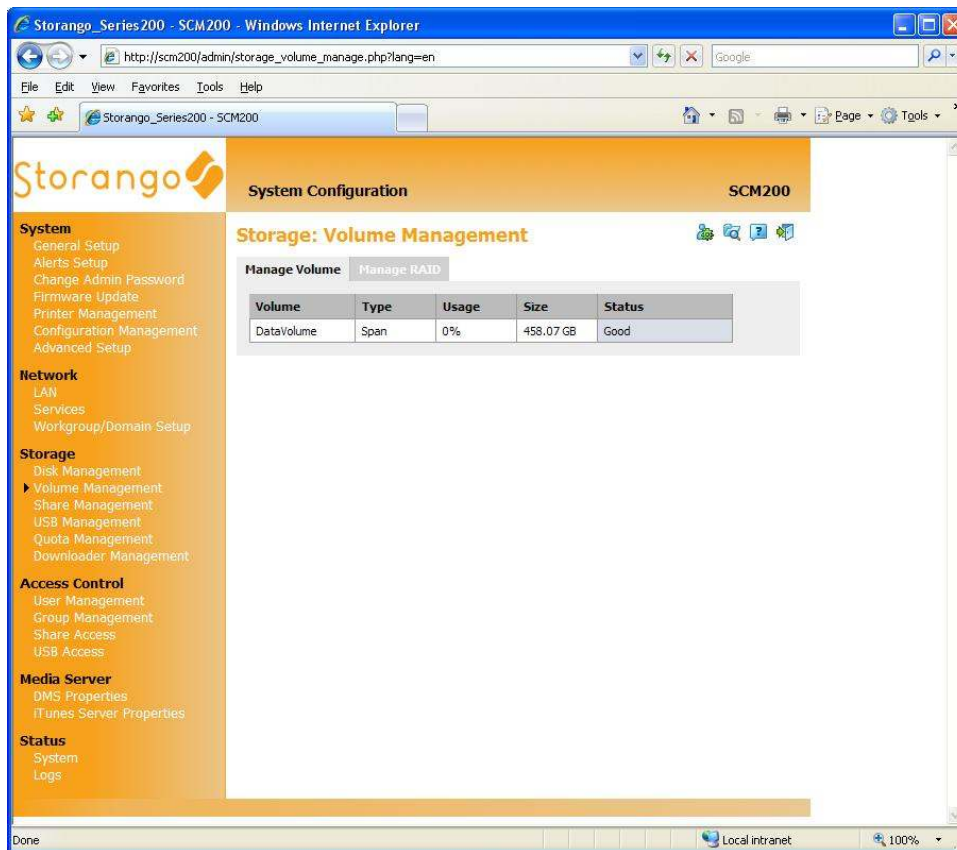
The Disk Management screen provides a detailed summary of the hard drives, installed on SCM200/SCM400. Again, on a SCM400, you will see up to four drives listed, unlike the two drives on the SCM200.

The drive status allows you to monitor hard drive fault conditions and activity.

Good - Indicates the hard drive is accessible and functioning normally.

Failed - Indicates a fatal error has occurred, such as the hard drive partition has been deleted, corrupted, or damaged, which could result in data loss.

Foreign - Indicates SCM200/SCM400 has detected an old hard drive or a hard drive containing other data has been installed. A Clean disk icon appears on disks that display the "Foreign" status. Unless the user performs a clean disk operation, the hard drive cannot be accessed. After performing a clean disk operation, the hard drive appears on the Disk Management table.



## Volume Management

The Manage Volume tab contains a table that shows all volumes currently defined on the SCM200/SCM400's hard drives and provides access to configuration details relating to how the disks are partitioned and how RAID volumes are created on these partitions.

These volumes are the ones used for creating shares.

### **Manage Volume**

The Manage Volume tab in the Volume Management submenu lists all the volumes available, and provides detailed summary about each volume, such as the name of the volume, description, RAID type (Stripe, Mirror, or Span), volume space used, total drive capacity, and status of the volume.

A volume is a portion of one or more hard disks that are configured to store data. On the Manage volume table, the volume status that appears in the Status column includes the following values:

**Good** - Indicates the volume is accessible and hard drive is functioning normally.

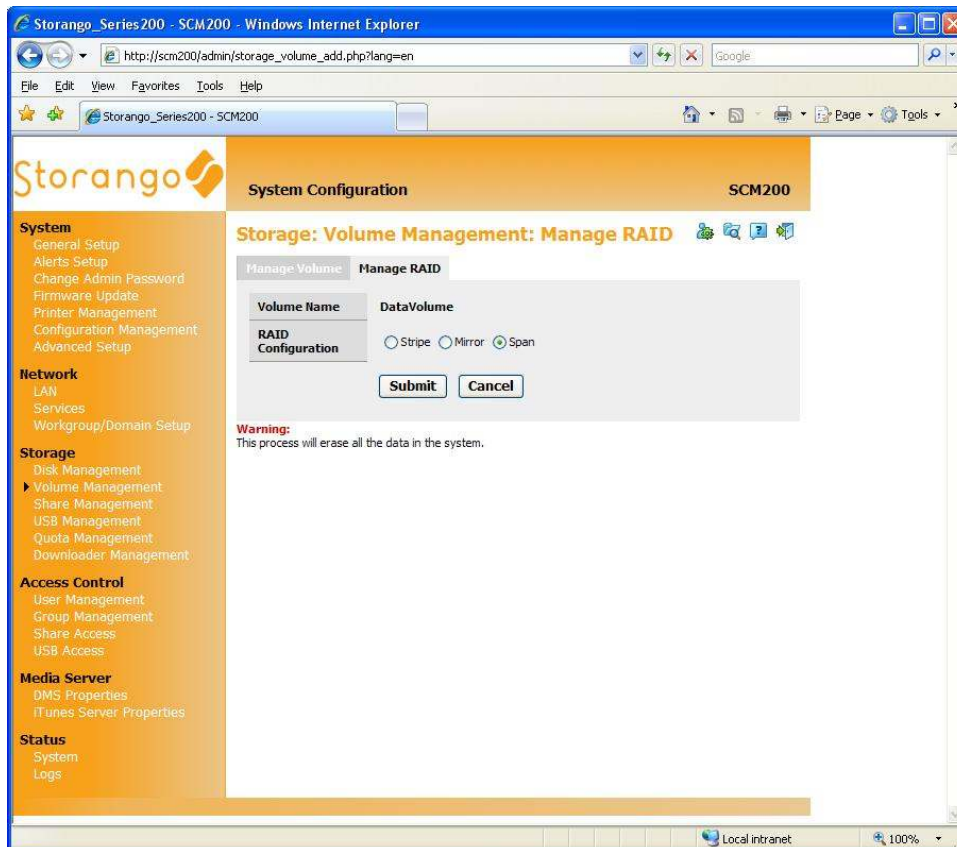
**Failed** - Indicates a volume cannot be started automatically, the disk is damaged or the file system is corrupt.

**Re-synching** - Occurs when creating a mirror or when a mirrored volume is being resynchronized so both mirrors contain identical data. With the four drive system and a RAID 5 volume, this could indicate the creation or recovery of the RAID set.

**Formatting** - Indicates volume is being formatted or system is creating an ext3 (third extended) file system for a Linux operating system.

*Degraded* - A drive is missing or contains corrupted data for the existing volume.

*Recovering* - Occurs when the system detects a spare drive that was inserted into a degraded RAID volume.



**WARNING: CHANGING THE RAID TYPE WILL ERASE ALL DATA. PLEASE BACKUP YOUR FILES BEFORE CHANGING THE RAID SETTINGS.**

## Manage RAID

The Manage RAID screen allows you to configure the SATA hard drives into different RAID types.

RAID (Redundant Array of Independent Disk Drives) refers to an array of multiple independent hard drives that provide high performance and reliability. RAID function depends on the number of drives present and the RAID level you selected.

SCM200 supports the following RAID levels:

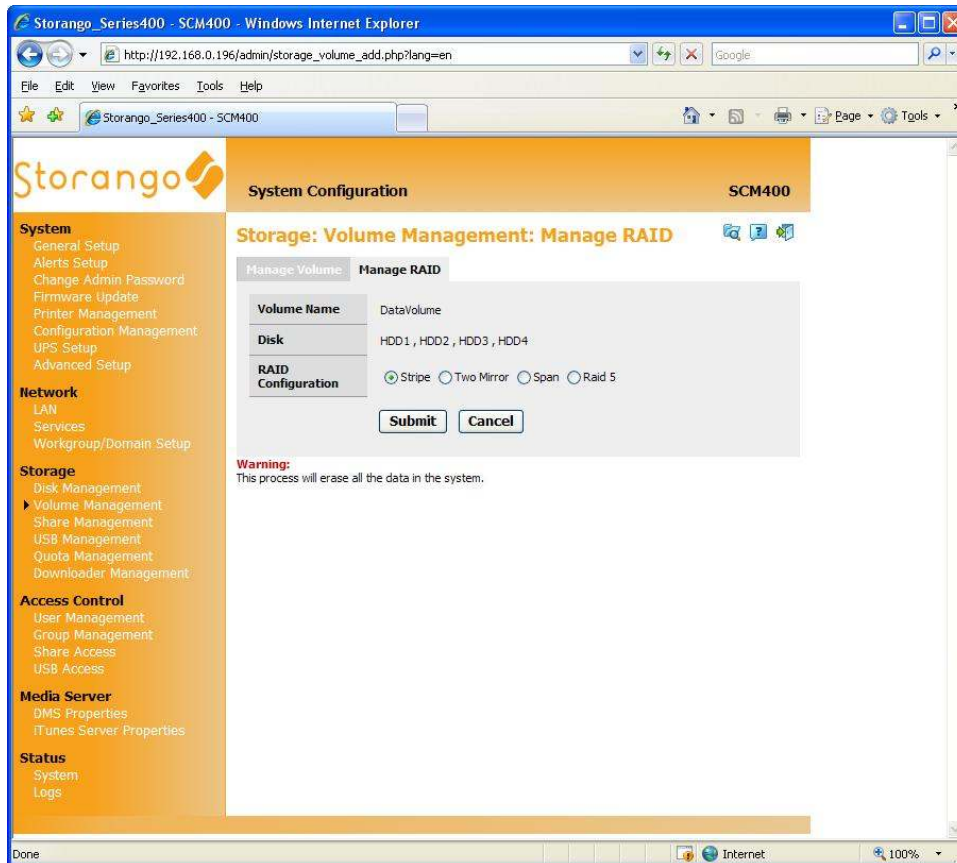
**Stripe (RAID 0)** - All data are distributed evenly to all existing drives. The two drives work in unison to maximize system performance. However, RAID 0 has high risks of data security. If one drive fails then all the data in both drives is lost.

**Mirror (RAID 1)** - Two hard drives are required. Data written to one hard drive is simultaneously duplicated to another hard drive. If one drive fails, the other drive continues to function as a single drive until the failed drive is replaced. To create a mirror you must select unallocated space on another hard drive and the unallocated space must be the same size or larger than the source drive you want to mirror that data. Data on a mirrored drive is secured, if one hard drive fails, SCM200 administers a warning and the failed drive must be replaced immediately.

**Span** - Also known as a Linear array. Two hard drives are required. Several hard drives are configured as a single volume with a size equal to the total of all the member disks. However, span does not increase system performance or data security.

Default RAID configuration - The default RAID configuration for each hard drive installed on SCM200 is as follows:

- If one drive is installed to an empty drive bay, the default RAID configuration is mirror and the volume status is degraded.
- If system has one hard drive and a new hard drive is added, the default RAID configuration is mirror and the volume status is good.
- If two hard drives are installed to an empty drive bay, the default RAID configuration is span.



SCM400 supports the following RAID levels:

**Stripe (RAID 0)** - All data are distributed evenly to all existing drives. The two drives work in unison to maximize system performance. However, RAID 0 has high risks of data security. If one drive fails then all the data in both drives is lost.

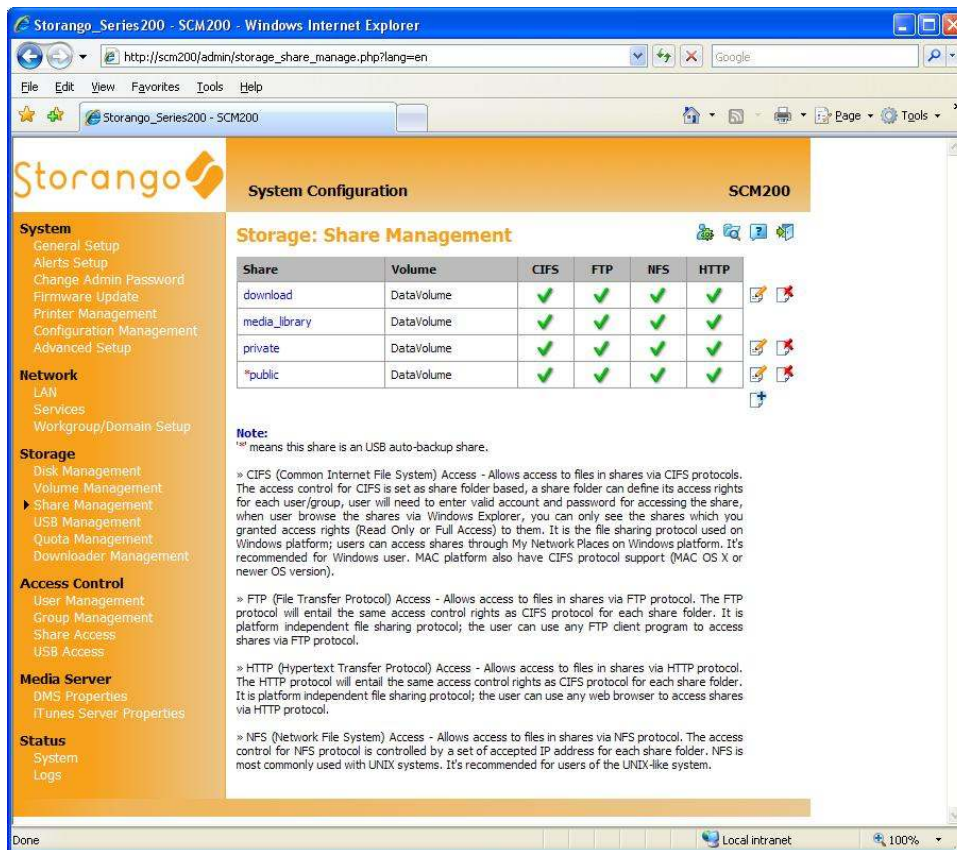
**Mirror (RAID 1)** - Two hard drives are required. Data written to one hard drive is simultaneously duplicated to another hard drive. If one drive fails, the other drive continues to function as a single drive until the failed drive is replaced. If you have four drives, the system will offer the mirror option as "Two Mirror". In this configuration, up to two drives can fail before any data is lost.

**Span** - Also known as a Linear array. Two hard drives are required. Several hard drives are configured as a single volume with a size equal to the total of all the member disks. However, span does not increase system performance or data security.

**RAID 5** - A minimum of three hard disks is required for this array type. This is a striped array with distributed parity, forming a redundant array. This type of array gives good performance and protects the data against any single drive failure.

Default RAID configuration: The default RAID configuration for each hard drive installed on SCM400 is as follows:

- If one drive is installed to an empty drive bay, the default RAID configuration is mirror and the volume status is degrade.
- If system has one hard drive and a new hard drive is added, the default RAID configuration is mirror and the volume status is good.
- If two or more hard drives are installed, the default RAID configuration is span.

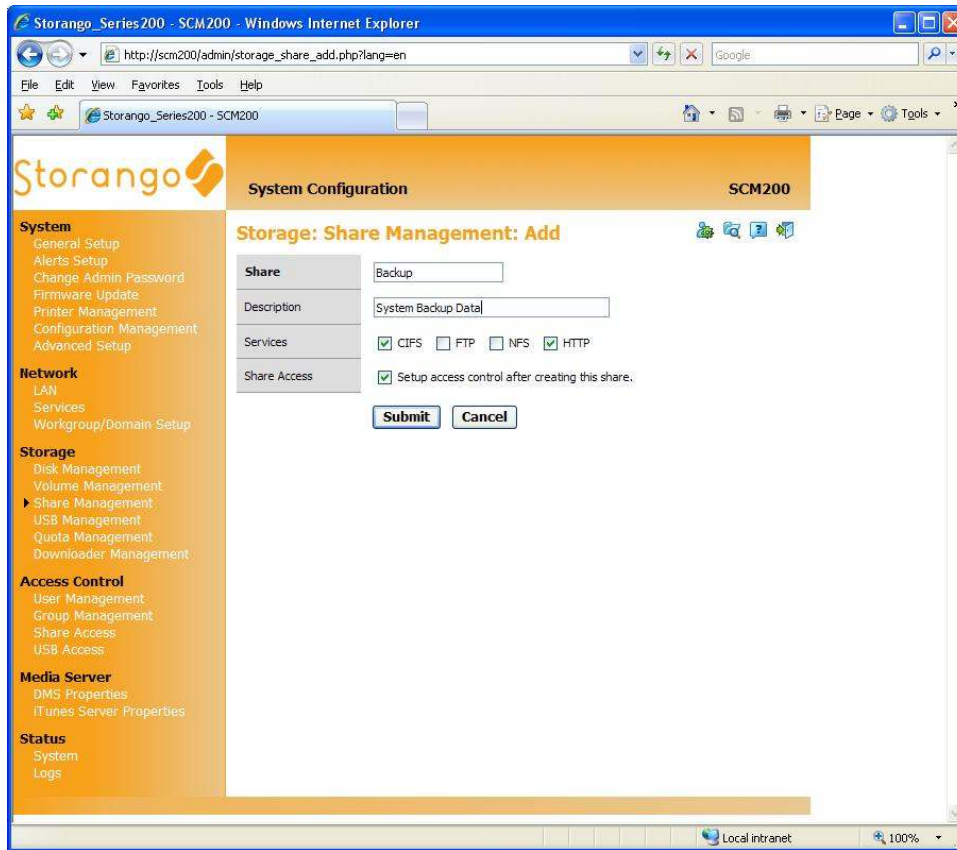


## Share Management

This screen provides access to configuration details relating to how shares are made available by the SCM200/SCM400. This menu contains a table that shows all the shares, logical volumes, and protocols currently defined on the SCM200/SCM400 system.

SCM200/SCM400 comes preconfigured with four shared folders: download, media\_library, public, and private.





### To create a new share on a logical volume:

Click on the **Create** icon 

Assign a **share name**. The share name can contain up to 32 characters, including alphabetic, numeric, or underscore.

Enter a **brief description**, if desired.

Select **file sharing protocol**. The SCM200/SCM400 supports the following file sharing protocols:

**CIFS** (Common Internet File System) - A standard way that clients share files across intranets. CIFS allows Windows, Mac, or Linux clients to access folders and files stored on your SCM200/SCM400. The access control for CIFS is set to each shared folder. You can define access rights for each user/group where the user will need to enter his/her password for accessing that share. When the client browses the shares via Windows Explorer, he can only see the shares which he has been granted access rights (Read Only or Full Access) to.

**FTP** (File Transfer Protocol) - Allows access to files on SCM200/SCM400 from most computers whether they are inside or outside your local network.

**HTTP** (Hypertext Transfer Protocol) - Allows access to folders and files on your SCM200/SCM400 using a Web browser. This method of access is unique, as most NAS boxes will not allow you to access the files in this way. You can, quite literally, access the files on the SCM200/SCM400 from any system with a web browser regardless, including some PDA's and cell phones.

**NFS** (Network File System) - Allows Linux clients or clients who have TCP/IP installed to remotely access folders and files on your SCM200/SCM400.

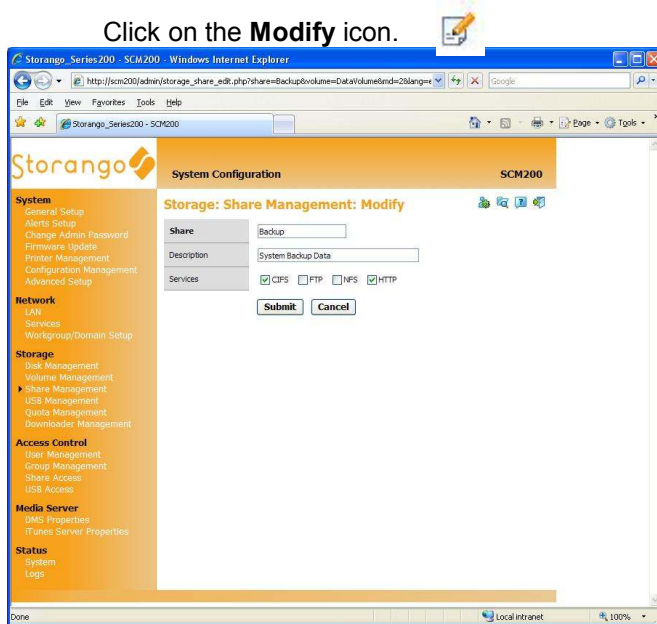
Using NFS protocol, the client can access all or a portion of the shared file directory on the network. The portion of the file directory can be accessed with the privileges (read only or full access) designated to each file.

Click **Submit**.

NOTE: If you have “Setup access control after creating share” checked, you will be taken directly to the Access Control for this share and you can assign users or make the share public for your network. Please refer to that section for more information.

### To modify the share properties:

Click on the **Modify** icon.



Assign a **new share name**. The share name can contain up to 32 characters, including alphabetic, numeric, or underscore.

Enter a **brief description**, if desired.

Select a **file sharing protocol**.

Click **Submit** to save your changes.

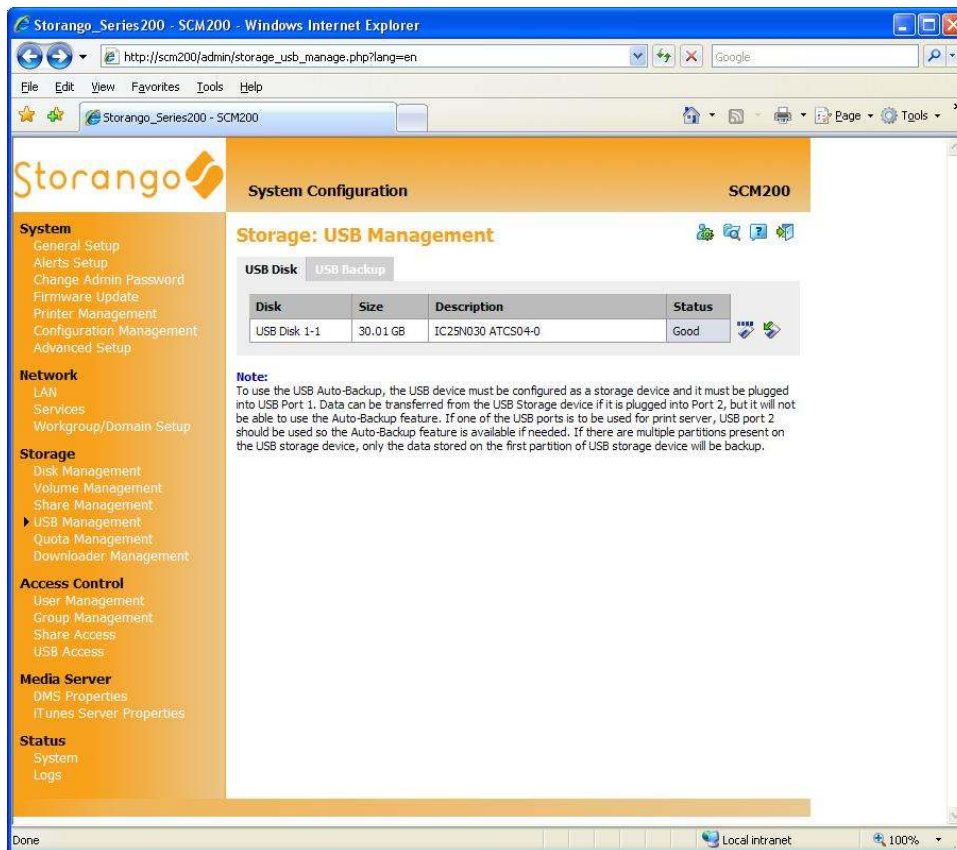
### To delete existing shares:

Select the share you want to delete.

Click the **Delete** icon.

A warning dialog box will appear.

Click on OK to delete the share.



## USB Management

The Storage Appliance supports USB external hard disk drives and USB Flash drives. It does not support USB CD/DVD/CDRW/DVDRW Drives.

**To format a USB hard drive: (Remember, formatting a drive erases all data from the drive, including any partitions, volumes...etc.)**

Connect a USB hard drive to SCM200/SCM400.

On the USB Management page, select the **USB Disk** tab.

Select the USB hard drive you want to format and click the **Format** icon.



A dialog box appears warning that all data will be erased.

Click **OK**.

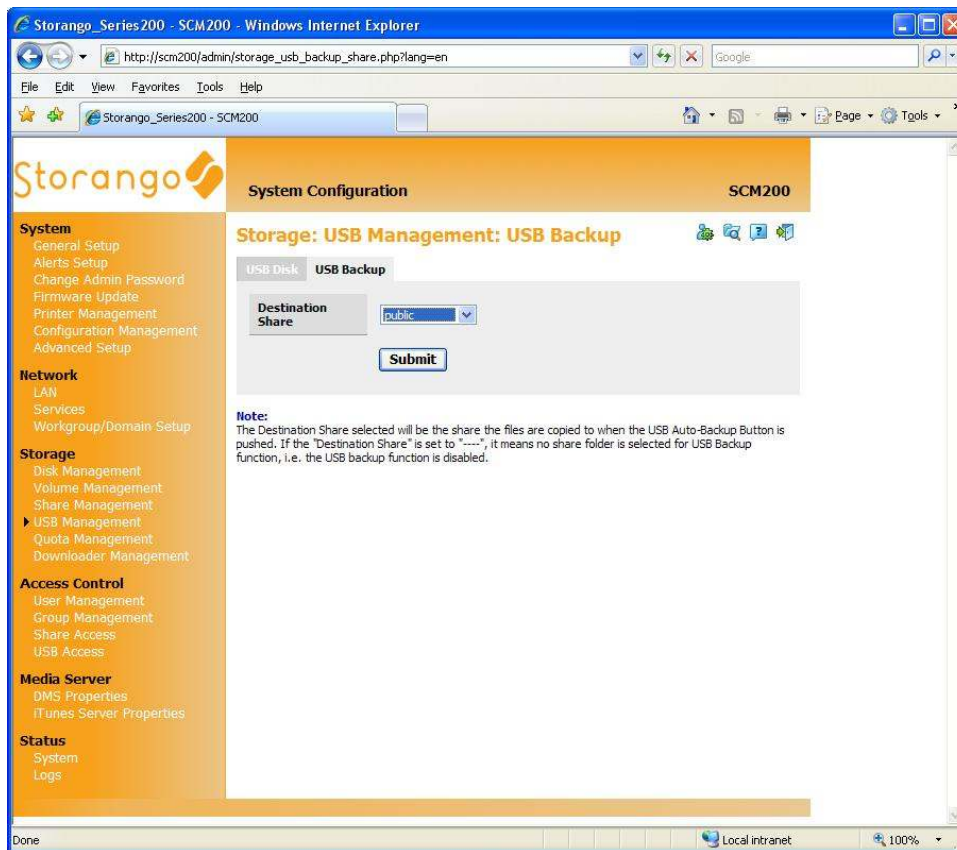
**To disconnect a USB hard drive from SCM200/SCM400:**

On the **USB Disk** tab, select the device you wish to remove.

Click the **Safely Remove Disk** icon.



Click **OK**.



## USB Backup

USB port number one, which is next to the Ethernet port on the SCM200 and on the front for the SCM400, has been configured to handle the automatic backup of the contents of a USB drive attached to the SCM200/SCM400. You can use the other USB port(s) for transferring data to and from the storage system, but only USB port one can be used for automatic backup.

### To set a destination share name for the USB hard drive:

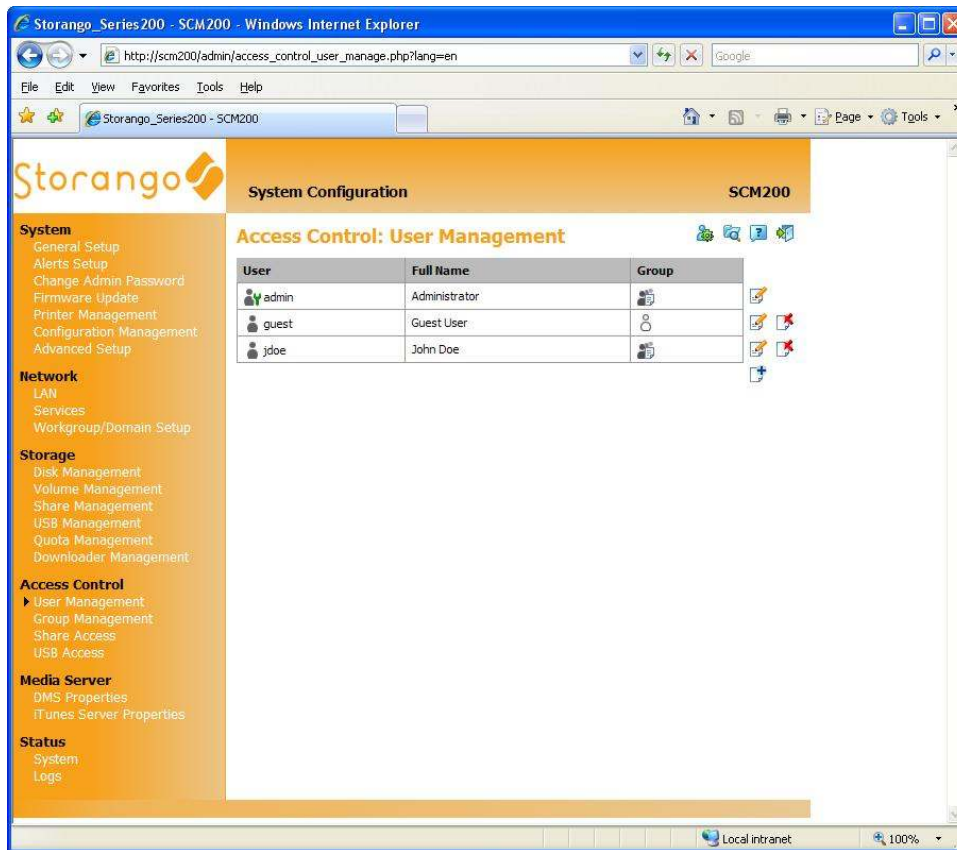
On the USB Management page, select the **USB Backup** tab.

Select a share to be used as a default backup share from the Destination Share drop-down menu. This is where all the files will be copied to from the USB drive. A folder within this share will be automatically created based on the volume name of the USB hard disk.

Click **Submit**.

## Access Control Section

The Access Control screens allow you to configure access to files and folder in the Storage Appliance.



## User Management

The User Management screen allows the system administrator to create, edit, and delete user accounts on the system. Administrators can create Public or Private user accounts and further customize these accounts with privilege levels.

### To create a user account:

Click the **Create** icon.



And the following screen will come up:

Storango Series200 - SCM200 - Windows Internet Explorer

http://scm200/admin/access\_control\_user\_add.php?lang=en

Storango Series200 - SCM200

System Configuration SCM200

**System**

- General Setup
- Alerts Setup
- Change Admin Password
- Firmware Update
- Printer Management
- Configuration Management
- Advanced Setup

**Network**

- LAN
- Services
- Workgroup/Domain Setup

**Storage**

- Disk Management
- Volume Management
- Share Management
- USB Management
- Quota Management
- Downloader Management

**Access Control**

- User Management
- Group Management
- Share Access
- USB Access

**Media Server**

- DMS Properties
- iTunes Server Properties

**Status**

- System
- Logs

**Access Control: User Management: Add**

User Name: jdoe / ☐ Grant Administration Rights

Full Name: John Doe

Password: .....

Confirm Password: .....

Group Member

Group List: [Empty Box] >> << [Empty Box] Group Joined:

Create User Private Share: ☐ Yes ☒ No

Submit Cancel

In the User name box, enter the **user name**.

Click the **Grant Administration Rights** checkbox to allow user to have administrative rights and to access and configure the System Configuration Utility.

In the Full Name box, enter the user's **full name**.

To secure the shared folder so that users must use a password to access it, enter a **password** in the Password box. The user name and passwords are case sensitive, and can contain up to 15 characters, including alphabet, numbers, underscore, and some special characters.

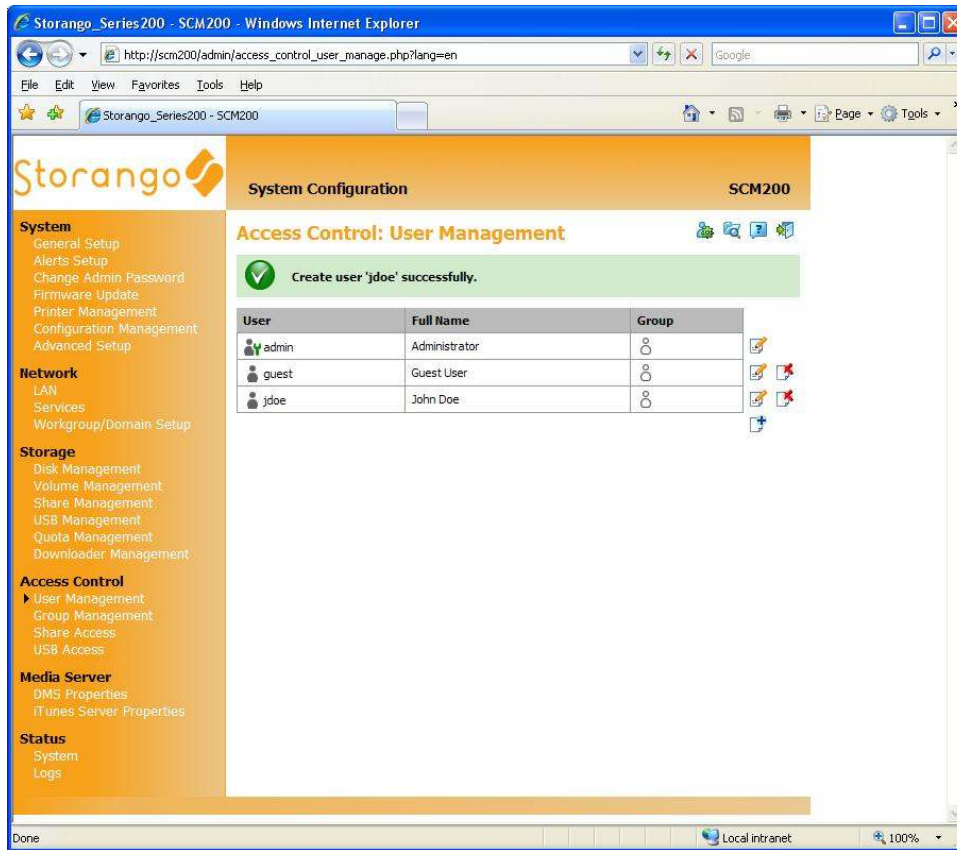
In the Confirm Password box, re-enter the **password** for confirmation.

In the Group List select a previously created **Group** for the user to join in. Click the >> button.

Select the **Yes** button in the Create User Private Share if you want to create a private folder for this user. Select an appropriate file sharing protocol to allow this share to be accessed by the user. The share will have the same name as the user's name.

Click **Submit**.





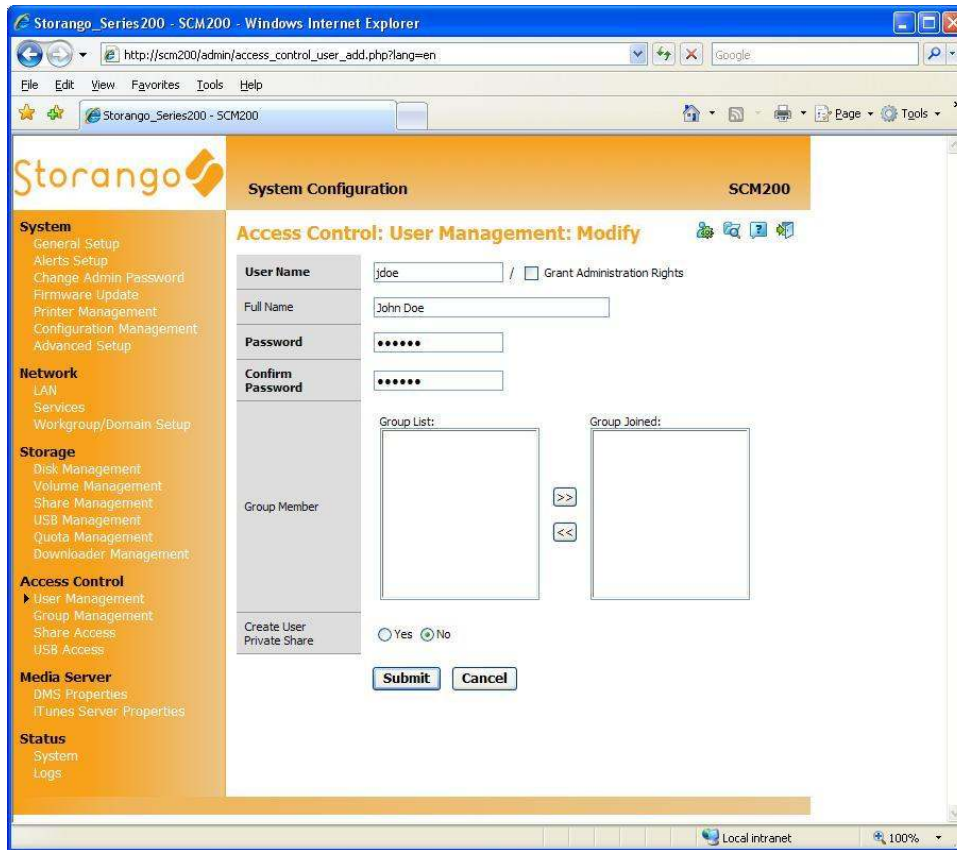
The above screen shows the new user has been added successfully.

#### To modify a user account:

Select the user account you want to modify.

Click the **Modify** icon. 

The following screen will come up:



Make the changes you want, then click **Submit**.

#### To delete a user:

Select the user account you want to delete.

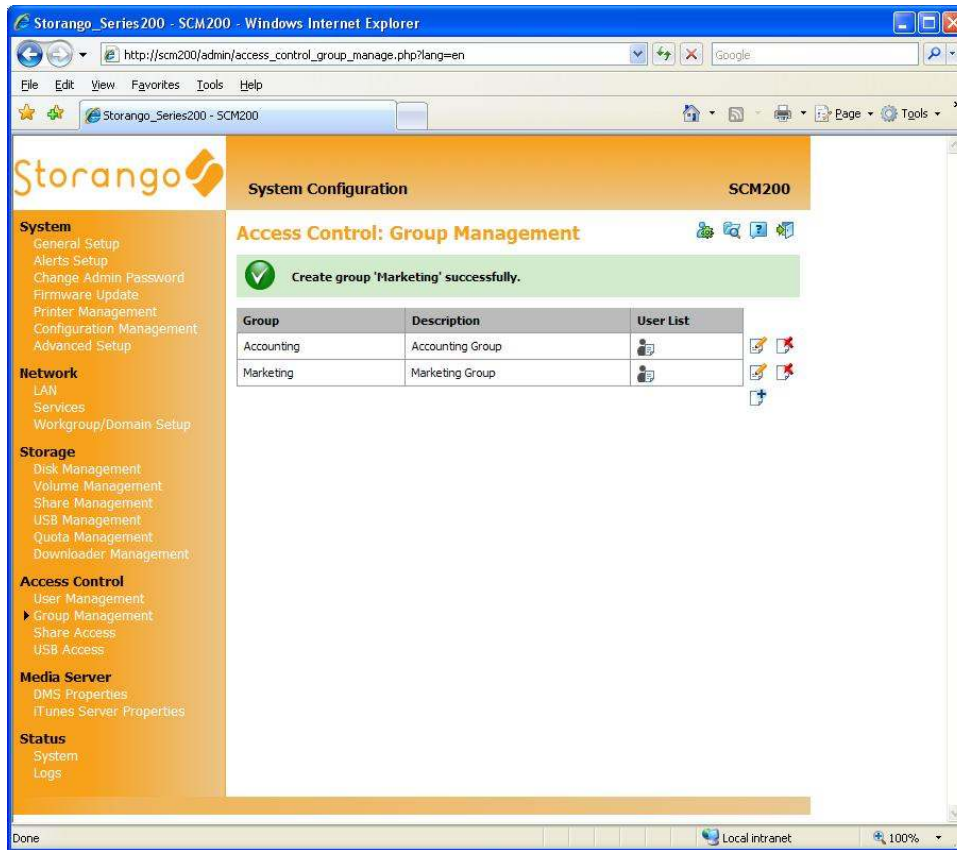
Click the **Delete** icon. 

You will get a warning about deleting of the user. Click on OK, and the user will be deleted.

## Group Management

The Group Management submenu allows administrators to create, edit, and delete a group of users on the system.

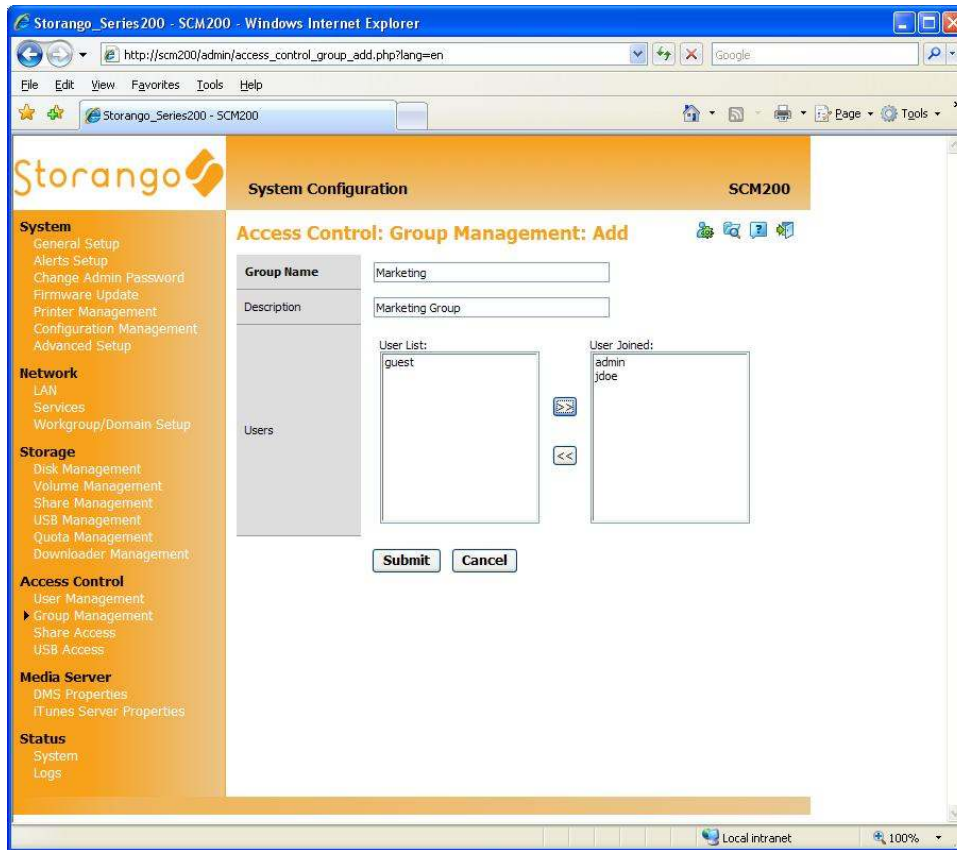




To create a new local group:

Click the **Create** icon.

And the following screen will come up:



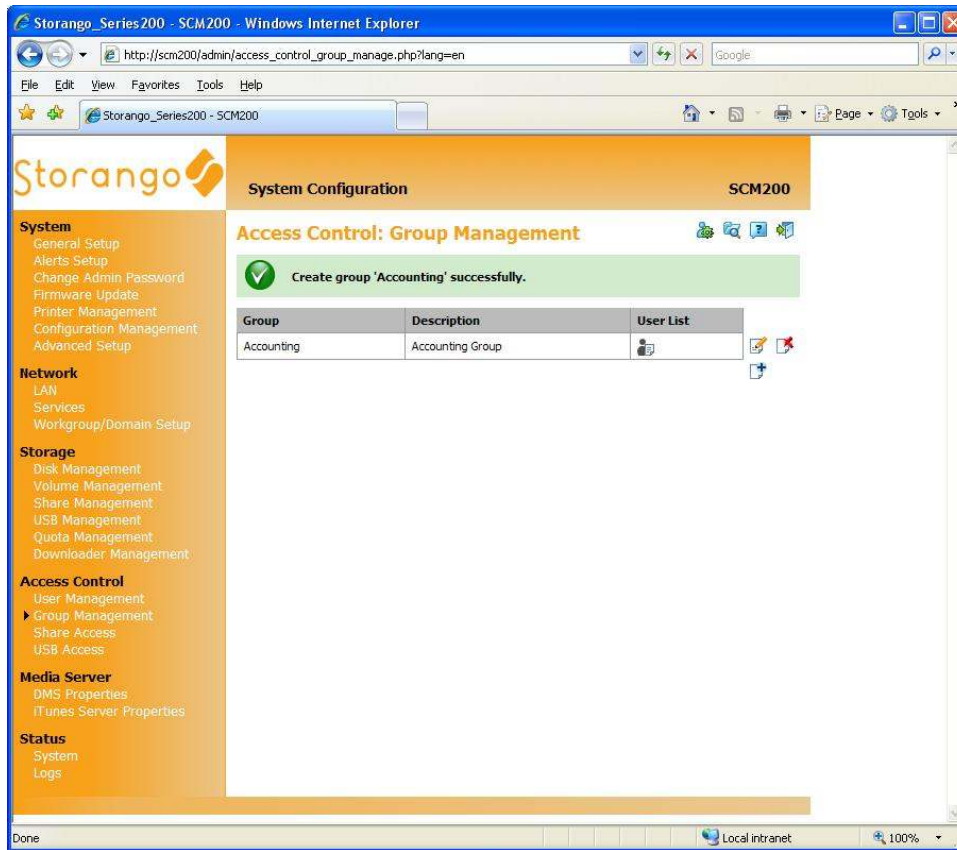
Assign a new **group name** for the new group. As before, the name can be up to 32 characters long.

Enter a **description** for the new group.

In the User List, add the users that you want to have access to the group.

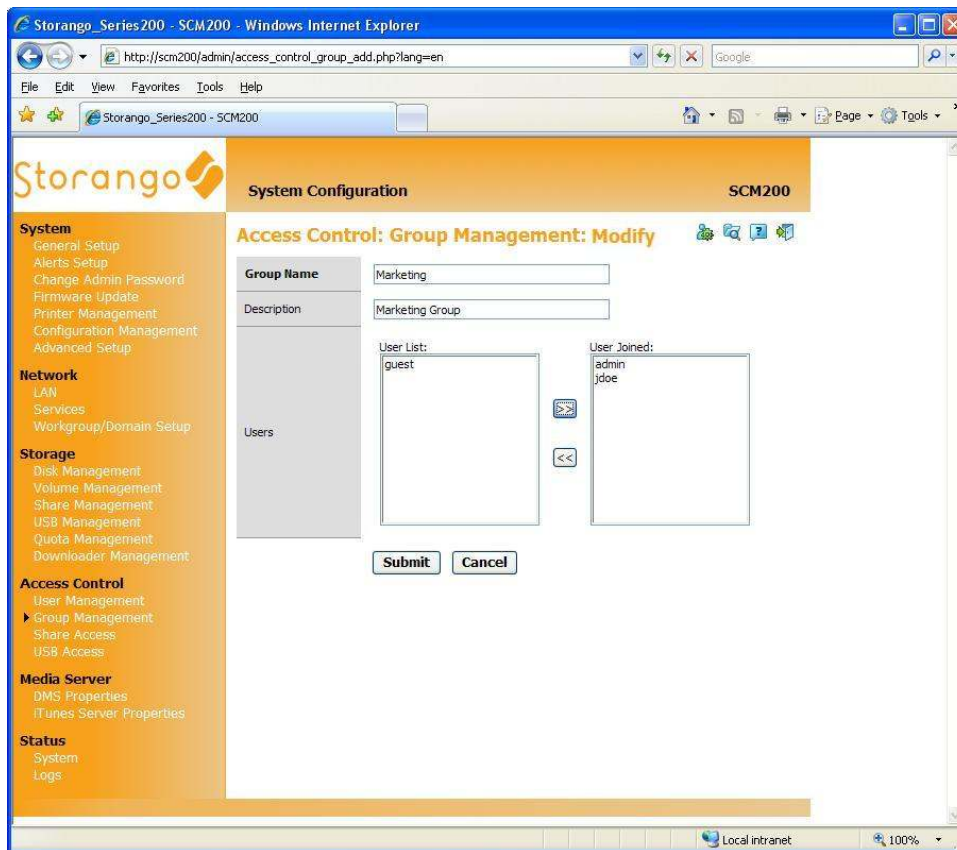
And Click **Submit**.

The following screen will show up to confirm that you have successfully created a new group.

**To modify a local group:**

Select the group you want to modify.

Click the **Modify** icon.



Make the changes you want, and then click **Submit**.

### To delete a local group:

Select the group you want to delete.

Click the **Delete** icon.






You will get a warning to confirm the deletion of the user group.

## Share Access

The Share Access screen allows administrators to set the access control for each user or group in the Access list. Each user or group defined in User Management must have an assigned privilege level for every shared folder on the storage appliance.

There are three privilege levels assigned to a user or group.

- Full Access 
- Read Only 
- No Access 

When there is a conflict in the access rights of the user and group, SCM200/SCM400 uses the following rule to handle the conflict:

No Access has the highest priority.

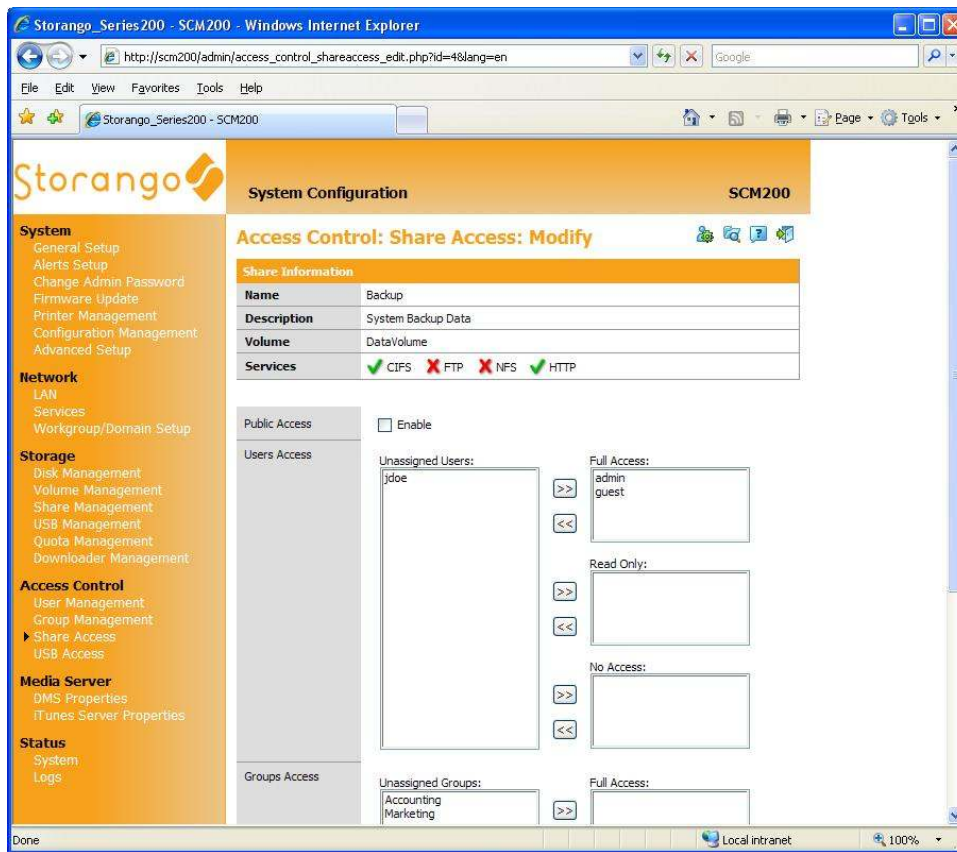
Read Write + Read Only = Full Access.

If the access control is assigned to a user or group, the full access, read only, and no access icons appear on the Share Access page. You can move your mouse over the icon to view the user or group list.



To assign privilege levels for users or groups:

Select a user or group, then click the **Edit** icon. 



The upper section of the page contains an information table that lists the share folder's logical volume name and supported file service protocol. Each defined user or group must have a privilege level for every shared folder you create.

Click the **Enable Public Access** checkbox if you want to enable any user or group to have access to the shared folder.

In NFS Access, you can set a privilege level for a Linux or Unix client.

In the Not Assigned Users list, select the **users** you want to grant full access, read only permission, or no access to the logical volume.

Click the >> button.

In the Not Assigned Groups list, select the **local groups** you want to grant full access, ready only permission, or no access to the logical volume.

Click the >> button.

Click **Submit**.

## USB Access

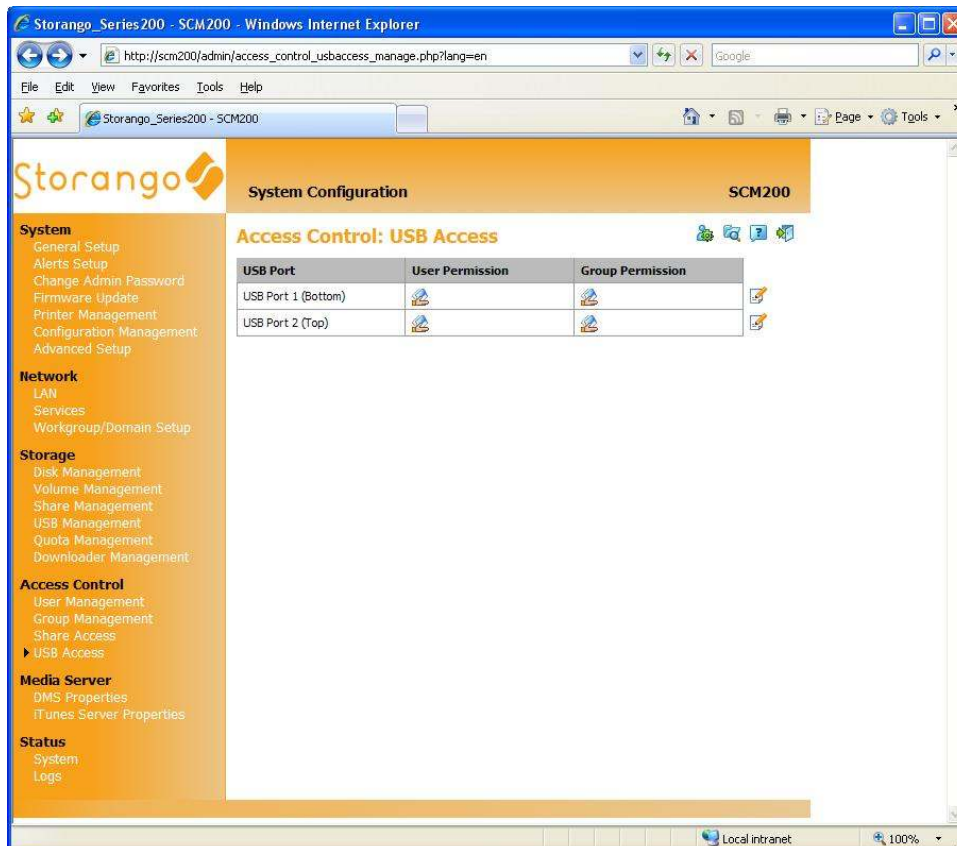
The USB Access submenu allows you to set the access control for the two USB ports on the rear of SCM200, and the one additional USB port in the front of the SCM400. There are three privilege levels that you can assign to a user or group are Full Access, Read Only, or No Access.

When there is a conflict in the access rights of the user and group, SCM200/SCM400 uses the following rule to handle the conflict:

No Access has the highest priority.

Read Write + Read Only = Full Access.

If the access control is set, a small icon appears on User/Group permission box, the administrator can move the mouse cursor over the icon to see the user/group list.



### To configure the privilege levels for a USB share:

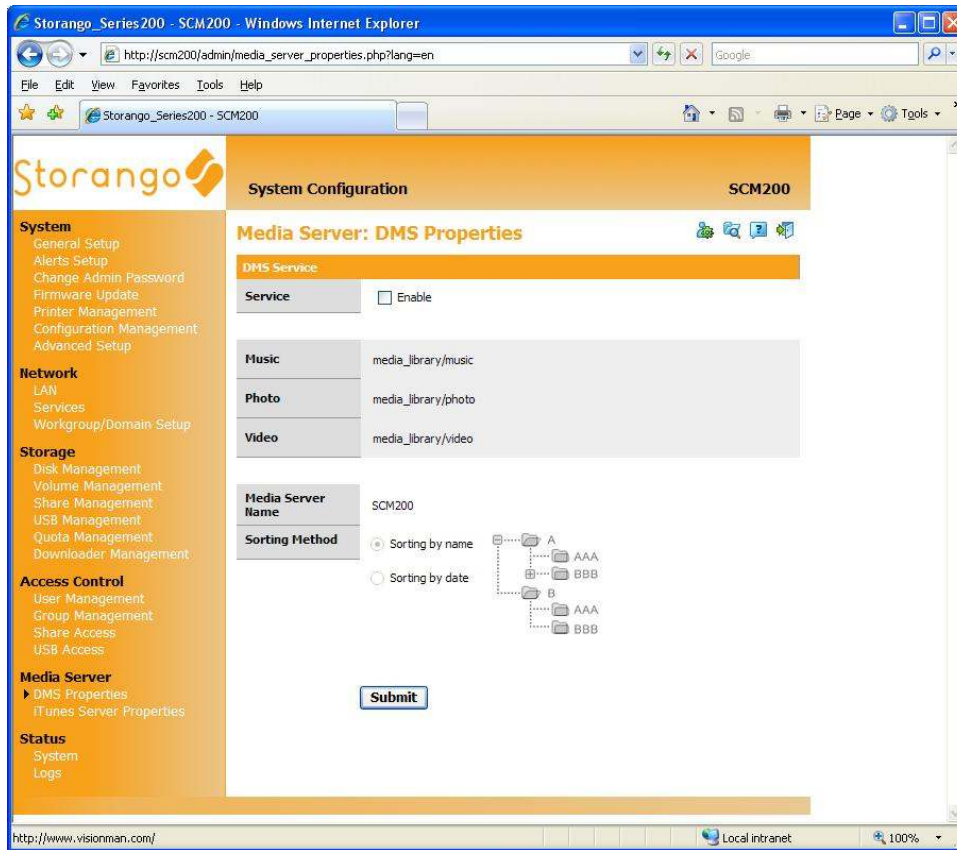
Select a USB share, then click the **Edit** icon.

Make the changes you want, then click **Submit**.

## Using the Media Server

This feature allows the Storage appliance to automatically sort media files into Music, Photo and Video categories and make them available on the network.



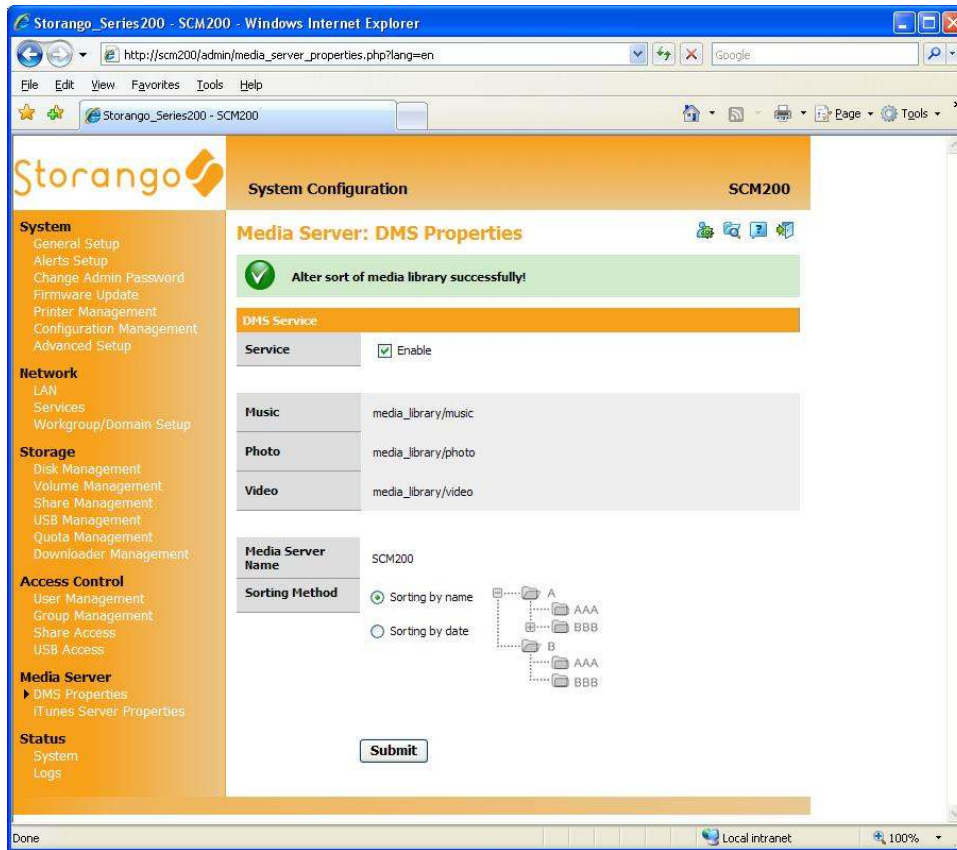


Enable the Media Server by selecting the **Enable** button.

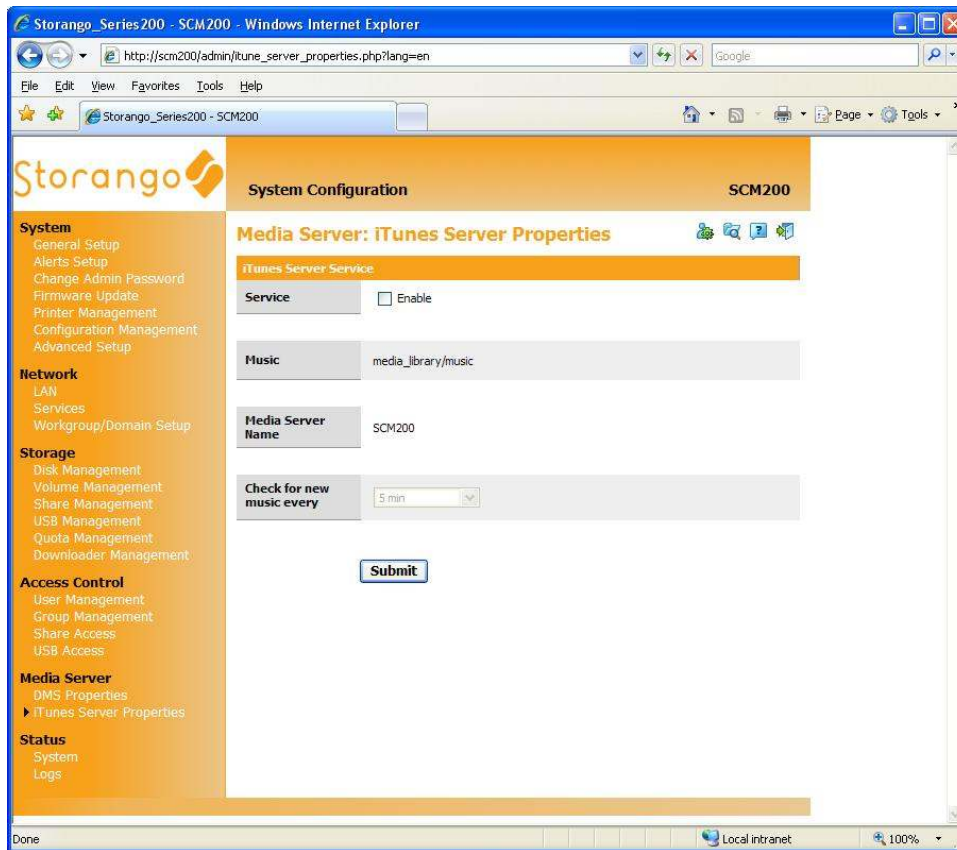
You can also decide if you want the media files sorted in alphabetical order or by the date the file was created.

Select **Submit**, for the system to sort the media content in the system and save your changes.





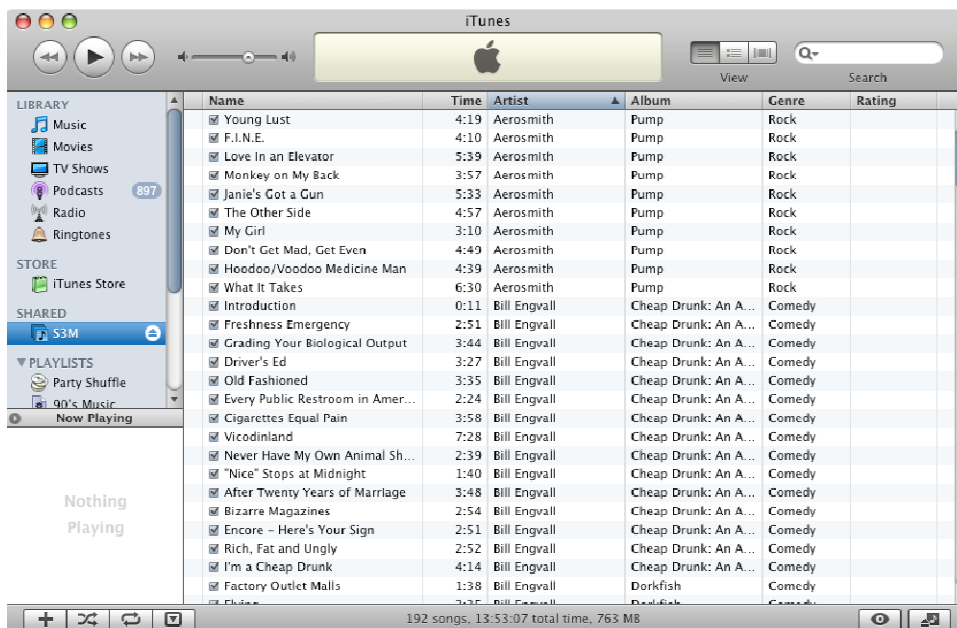
The above screen will show that media content in the storage system has been identified and sorted.

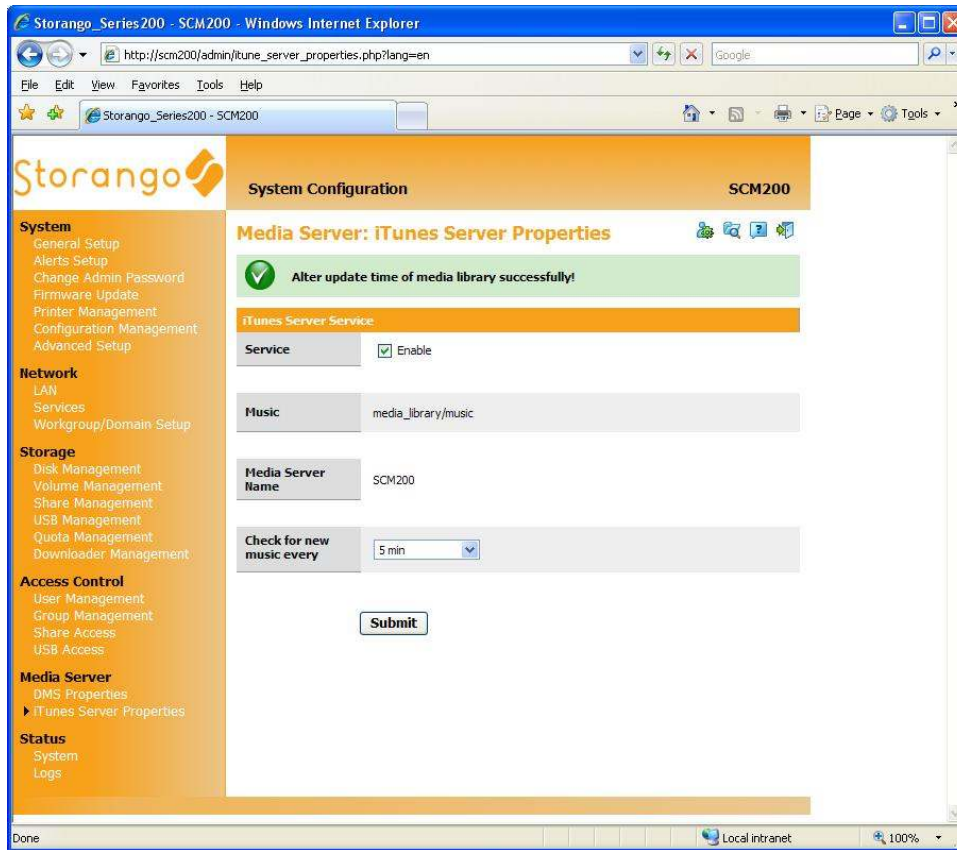


Enable the iTunes Server by selecting the **Enable** button.

Select **Submit**, for the system to save your changes.

You will then see the server appear in the shared area on your iTunes application. Any songs you have transferred to the media\_library will automatically appear when you click on the server name. A server named "S3M" has been configured in the following example.

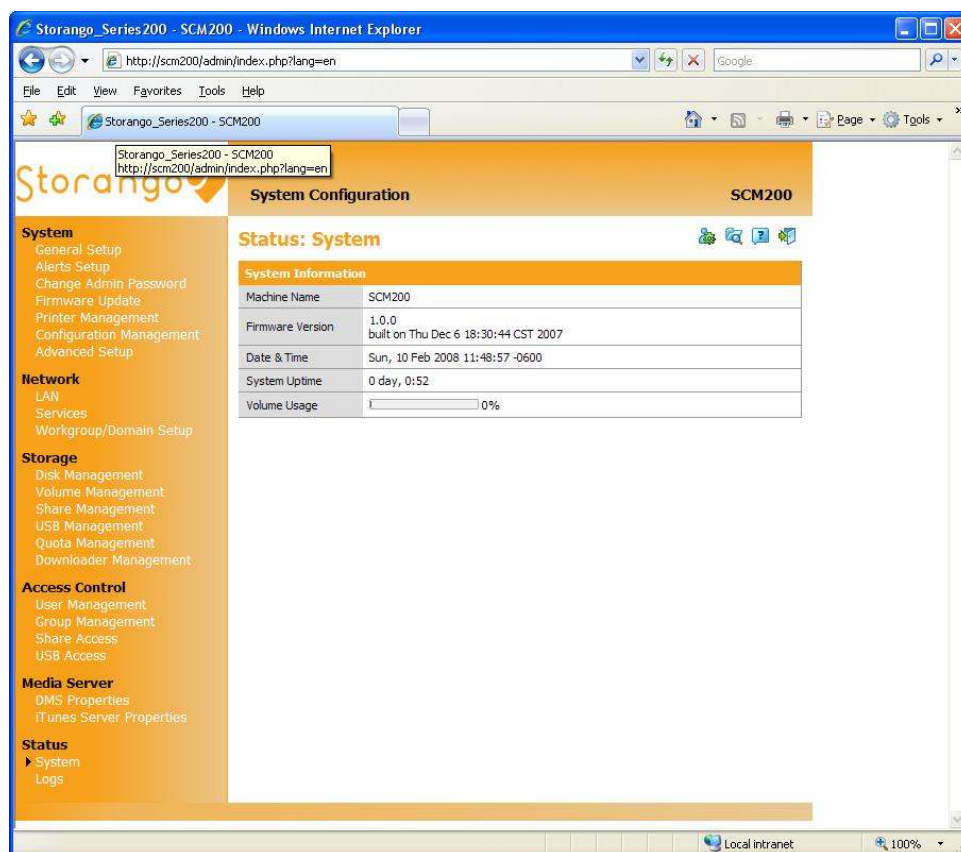




The above screen will show that media content in the storage system has been identified and sorted.

## Using the Status Menu

The Status menu displays general information about the system, such as machine name, firmware version, current date/time, machine up-time, and volume of the storage space that is being used.



## Logs

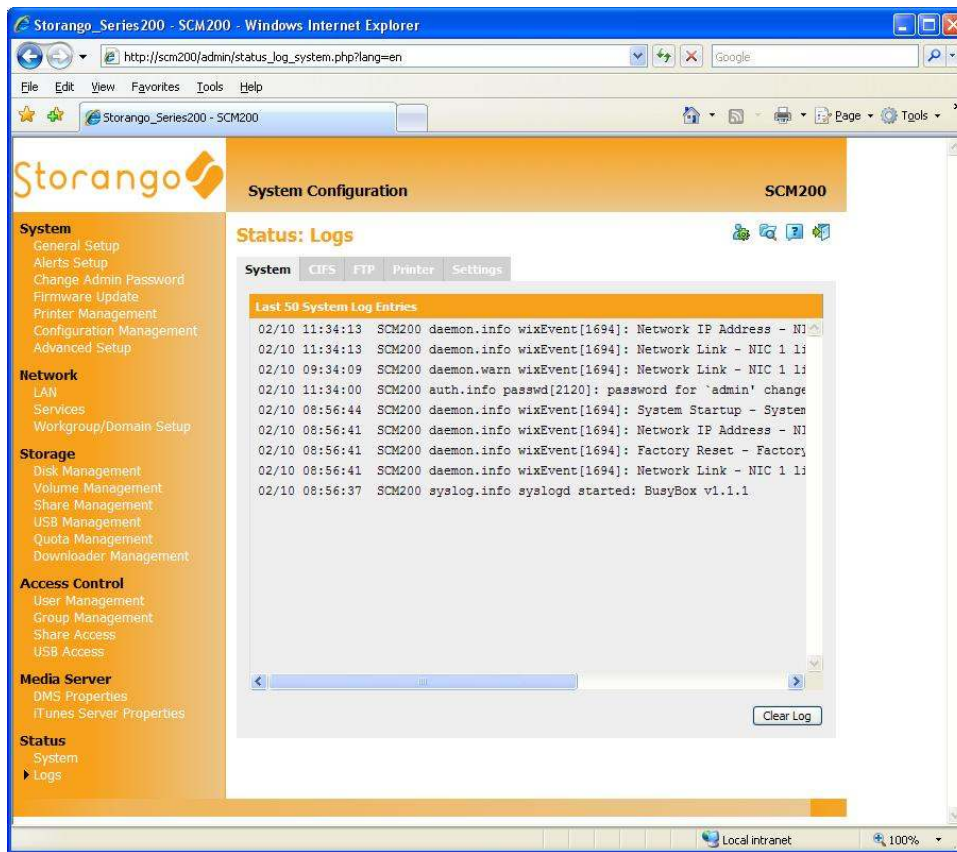
Logs screen includes five tabs — System, CIFS, FTP, Printer, Settings. It displays a record of activity that has occurred on storage device. Each activity displays a time and date associated with the event and a description of the activity that took place.

### Settings Tab

In the settings tab, you can decide the sequence that the log should be showed and the size of the log.

### System

In the System tab, you will view information about the system, file and services requested, Web pages transferred from SCM200/SCM400 to a client computer, or print events.



The above is an example of the display from the system logs screen.

The System Logs records significant problems that occur in the system. You can obtain information from the following conditions or errors that may occur in the system components, hardware or software components.

- System shutdown
- System reboot
- Fan failed or defective fan
- System temperature exceeds a threshold value
- Disk SMART failure
- Volume failed or does not exist
- Volume space is full or close to 100%
- Unsafe removal of a USB mass storage device

Each event is classified into following types:

**Critical** - An event such as fan failed, system temperature has exceeded the threshold level, Disk SMART failed, volume space is full or close to 100%. When a critical event occurs, the system status LED lights up and the system records the events in the System Log.

**Warning** - An event that is not necessarily significant, but may indicate a possible future problem. An email or pop-up message alert is sent to notify user of the problem that occurred in the system.

**Information** - An event that describes the successful operation of an application, driver, or service.

The CIFS, FTP and Printer tabs track the logs for their respective functions.

***CIFS***

The CIFS (Common Internet File System) tab displays the file and print services log of CIFS clients.

***FTP***

The FTP (File Transfer Protocol) tab displays file transfer sessions to and from the SCM200/SCM400.

***Printer***

The Printer tab displays the print services log.

## ***Product Support***

To get the latest firmware, please visit [Visionman.com](http://Visionman.com) web site to find the latest firmware version, and instructions on how to download and update the firmware on your Storango SCM200/SCM400.

## **Troubleshooting**

For any issue, first ensure that you are using the latest firmware for the Storango SCM200/SCM400. If you are unable to resolve your server problems on your own, contact your dealer or Storango for assistance.

## **First Steps Checklist**

Is power being supplied to the unit?

Are all cables correctly connected and secured?

Turn the power on by pressing the switch. The Power LED should light up and be steady on (not flashing).

## **Specific Problems and Corrective Actions**

The following contains specific problems that may arise during the use of your server. Possible solutions are listed for each problem.

### ***HDD activity indicator does not light.***

If the drives are pre-installed (came with the system), contact technical support for assistance.

If you installed the drives, make sure that the drives are seated securely and properly in their respective slots. The front drive latch should click when it is correctly in the slot and be almost flush with the front of the unit (with the door open).

### ***System cannot connect to a network and network status indicator does not light.***

Make sure the network cable is securely attached to the correct connector at the system rear panel.

Confirm that the network is functional, by checking other devices on the network to confirm that network access is working properly.

Try a different network cable.

### ***Cannot view System Configuration Utility in the Web browser.***

Make sure JavaScript is enabled in your browser. The following describes how to enable JavaScript using Internet Explorer 6.0 and Mozilla Firefox (1.0 and 1.5) for Windows.

To enable JavaScript in Internet Explorer 6.0:

From the Internet Explorer menu, go to Tools, then select Internet Options.

Choose the Security tab, then click Custom Level.

Scroll down to Active Scripting, then select Enable.

Click OK.

To enable JavaScript in Mozilla Firefox 1.0:

From the Mozilla Firefox browser, select **Tools**.

Click **Options**, then select **Web Features**.

Select the **Enable JavaScript** check box, then click **OK**.

To enable JavaScript in Mozilla Firefox 1.5:

From the Mozilla Firefox browser, select **Tools**.

Click **Content**.

Select the **Enable JavaScript** check box, then click **OK**.

### ***How do I manually create a pair of SSL certificate and key on a Linux system?***

Generate a RSA private key by typing the following commands:

```
/usr/bin/openssl genrsa 1024 > server.key/bin/cat server.key
```

From the Mozilla Firefox browser, select Tools.

Copy and paste to the Key field of the SSL Certificate/Key on the Advanced Setup page.

Create a self-signed certificate by typing the following commands:

```
/usr/bin/openssl req -new -key server.key -x509 -out server.crt/bin/cat server.crt
```

Copy and paste to the Certificate field of the SSL Certificate/Key on the Advanced Setup page.

## ***Technical Specifications***

The table below lists the technical specifications for the Storango SCM200/SCM400 storage appliance.

Model Name	Storango SCM200/SCM400
Form Factor	4-bay for the SCM400 2-bay for the SCM200
Processor	Marvell 5281 500 MHz AMR9 SOC for the SCM400 Marvell 5182 500 MHz ARM9 SOC for the SCM200
Memory	128 MB DDR333 SDRAM for application storage



	16 MB flash ROM for firmware storage	
Storage Capacity	320 GBs - 2 TBs	
Hard Drives Supported	3.5" SATA II 7200 RPM Hard Drive Buffer Size	8 MB
cache and above		
RAID Constructs	RAID 0 (Stripe), 1 (Mirror), 5 (Parity), Linear (Span)	
USB interface	3 (SCM400) and 2 (SCM200) x USB 2.0 ports for USB device extension and file backup	
Ethernet	(10/100/1000) Gigabit Ethernet port	
IP	DHCP (Auto IP, changes), Static (Manual, constant) Protocols	HTTP,
	HTTPS, CIFS, NFS, FTP, SMB	
Operating Systems	Windows Vista, Windows 2000 SP4, Windows XP, Windows 2003, Red Hat Enterprise Linux 2.6.7, MAC OS 10.1	
File Systems	NTFS, FAT	
W x H x D (in)	9.5 x 11.5 x 11 in (SCM200)	
	6 x 7.5 x 11 in (SCM400)	
Weight (lbs)	6 lbs (SCM200)	
	16 lbs (SCM400)	
Power Requirement	100-240 V 50/60 Hz	
Consumption	150 W max	
Operating Temperature	0 to -40 deg C	
Operating Humidity	0% to 80% (non-condensing) Operating Shock	3.5 G.
	3 ms	
Non-Operating Shock	30 G, 1 ms	
Operating Vibration	0.25 G at 2 Hz to 200 Hz	
Safety and Agency	FCC Class A / CE / UL / CB	